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EVA D. KELLOGG, EDITOR

IFE holds many Mays.
We shall forget, 'mid future brightness won,
Our cheerless yesterdays."

Every well rounded day in the schoolroom has, in some little way, brought the children and nature nearer together.

It is a general complaint among teachers that the botany help given in educational journals is "over the heads of the children." For this reason the serial articles, "Botany for Little Folks," by Miss Blaisdell, now appearing in this paper, are kept within range of the very "wee ones" of the flock. The freshness and spontaneity of these suggestive lessons must appeal to primary teachers, for the interest created in the opening paragraph is kept up with a zeal born of the love of the subject and grows stronger to the end. The necessary illustration of the lesson in this number will be found in the supplementary chart accompanying the April number of PRIMARY EDUCATION.

Decoration day in primary schools. What can be done? Not much in the way of formal exercises in the first and second year grades. And yet, more can be done with these children to put the day and the reason for its observance on a right basis for the future of the republic, than in any other schools in the country. The right impression made on these fresh young souls will put the future men and women of this republic in a proper attitude toward the past, present, and future of our country's history and action.

Do not let us send these children home from school on the night preceding "Memorial day" with a Fourth of July spirit full of holiday license wholly at variance with the real meaning of the coming day. Miscellaneous exercises at school, even of a patriotic character, are almost sure to produce this result. But the teacher who can spend the closing hours in such a talk or program as will deepen love of country and implant a tender reverence for the soldiers, living or dead, who gave all for its welfare, has done much to prepare the children for Memorial day and for future citizenship. It is the *pathos* of the occasion that these children need to feel, unmixed with bitterness or reproach for the causes of the sorrowful past. Let them feel that

> "May has a sacred day,
> When the people lay crowns of lilies and crowns of bay,
> On the gallant dust of the Blue and the Gray —
> Memorial Day."

At the Commemoration of Froebel's birthday in Boston, April 21, Rev. Hamilton W. Mabie spoke on "The Creative Element in Education." Mr. Mabie claimed there must be something wrong in the educational methods since the creative periods were so rare. "Creation is not something of the past. *The world is being made to-day.* The spring time, when the birds build their nests, the leaves shoot out and the flowers fill the air with their fragrance, shows that God is still creating. Education must have a vivifying influence, and nothing but the chalk which falls from the blackboard is so dry as an educational system or method without the man behind it.

Is not something left out of our education that accounts for the lack of creative enthusiasm? To give a man his tools and simply teach him to use them, is not to make him an artist, but an artisan. He has not been made a new contributing force with God. There is a certain kind of scholarship that gives out the critical instead of the creative power. The critical spirit is useful, but it should not be dominant. It needs freshness of feeling to be co-creators with God. Here is where Froebel has something to teach. He has originated a philosophy, which, if applied to education, will revolutionize it.

We must learn to take things sympathetically instead of analytically. Great lives must be sunk below the conscious intellect.

Froebel was a poet when he saw that education was not a matter of the mind, but of the soul supremely, and that he who would teach must himself sit at the feet of nature. The things we do as work may be very necessary, but it is not until we do them as play, spontaneously, that we reach art. We will never get the best results till we train and develop the imagination, and in Froebel we will find the educational renaissance."

A large variety of material for Closing Exercise will be found in our "Entertainment" pages thi month. The teachers will welcome the fresh original matter that has been prepared especially for the "last day" with the little ones. With the thought of the limited space for such exercises in the ordinary primary schoolroom, there has been no planning for stage effects or elaborate dressing. Everything has been arranged as simply as possible so that quick effects can be secured with simple means.

Working Together.

"I have fifty-eight children this spring term, and expect thirteen more," despairingly writes a first grade primary teacher to a friend.

And this is nineteenth century enlightenment! This is progress in education! This, in a carefully-graded school in a large city that boasts of its "system."

What shall this teacher do? She knows before she undertakes it, that she cannot do it — cannot give either those children or herself the opportunity to accomplish the legitimate object of primary school work. The languor of spring days is upon them — the prostrating heat of summer is coming, and yet this hopeless condition of affairs must be met, heroically, cheerfully and even silently. If not cheerfully courageous, she is a failure. If not silent — if she protests for the children's sake alone, she is a "fussy teacher," and this will be scored against her for future "count" when the brother's wife's cousin of some "board" member wants a "place."

Not to be satisfied with existing ills, and to have the courage to say so, is to be "fussy" always; to push hard enough to remedy these evils, is to be a "reformer." It all seems very much like killing people; one "kill" constitutes a murder—ten thousand, a hero.

For this reason, because numbers constitute strength and compel the attention and respect of a public, whose dreaded "opinion" makes cowards of us all, it is of the utmost importance for the truest welfare of the children, the teachers, and to the public school system as a whole, that the great army of primary teachers unite in the strength of their numbers and the weight of their influence to bring about some necessary changes pertaining to their work. The need of these are recognized by these teachers, everywhere, with singular unanimity. Question primary teachers, separately, from Maine to Texas, and from California to the Carolinas, as to the changes they most desire, and the similarity of their replies would "carry" any fair minded jury.

Are not these some of them?

First, and Above All.

Fewer children in each room. No primary teacher can do ingenious, inspiring work with more than thirty children in one room. If there are more, a competent assistant should be furnished. The individual demands made upon the nervous energies, and sympathetic motherhood of the true primary teacher, will exhaust, in three or four hours a day, all the physical and mental strength that a first year primary teacher can accumulate out of school hours and compel a daily draft upon her constitution-capital besides.

Add to this the time spent outside regular school hours in preparation for the daily work, and the hours left for recuperation come far short of the physical demand. No school board, no parents, are expected to realize this. How should they? The duty of primary teachers of the first and second year grades is to combine forces and find means to present the facts, respectfully, forcibly and *persistently* to an intelligent public, compelling the truth to penetrate and percolate through layer on layer of private, individual interest, till it reaches the innate sense of right and justice that does exist in humanity. Then a reform will follow. Ten teachers cannot do this; ten times ten cannot, but there are thousands of primary teachers who are silent sufferers from this cause alone, who could influence the thought and action of a whole country, if systematically organized and working in concerted action. Instead of this, teachers will go on, submitting, overworking, and — *breaking down*. Is the cause of education, or the welfare of the children served by this unwise sacrifice?

Another crying need is the supply of necessary material for schoolroom use. It would be amusing, if not so exasperating to see the complacent satisfaction with which school boards legislate as to a course of study in primary schools. All the latest appliances for progressive work are voted for, but where is the material necessary to carry out these plans? The teaching of color, language, number, reading, form, and clay modeling, besides the endless devices for "busy-work," call for a quantity of material that is nothing less than formidable for small-salaried teachers to face. What do they do? Pride and ambition are powerful spurs, and, rather than fail, they buy them themselves. The only return, outside of a reputation, lies in the possible "pension" they may receive in their old age if they stay long enough in the schoolroom to be good for nothing elsewhere.

All this is possible even with a fair-minded "board" to whom the money part of the matter has never occurred, and if it did, why, "a few cents for this or for that, is a trifling affair." Yes, but it is "the few cents" + "the few cents" + a few more cents that leads to bankruptcy with the $40 or $50 a month, needed in a dozen other directions. A single teacher might find only suicide to go alone to these legislative lords in actual session; but the sensation of being visited by half a hundred teachers in a body, asking for justice and an appropriation for needed material to work with, would probably secure both, even if accompanied by "leave to withdraw." In union there is strength.

The two lowest primary rooms should have large play rooms attached. Public sentiment can be educated to this, as well as to improvement in light and ventilation if there is enough united effort made by teachers.

There should be a library for primary teachers in every building in addition to the general pedagogical library for all teachers. The amount of primary literature is large. No teacher can afford to own it all, but she ought to have access to the best of it. Co-operative effort in this would secure a nucleus of a choice library the first year. Actual experience has proved this in many localities.

Beside these material needs there are many other needs of head and heart. These, too, can be supplied, through a union of sentiment and action among teachers. To illustrate. At all annual public meetings of teachers the "primary section" is found to be larger than all the others put together. Some of these teachers come full of interest, and activity, desiring to hear something sympathetic and helpful. Others are there from a sense of duty alone, but *they* need the bread of life, more even than the others. In place of bread, they all get a stone and, as a rule, not a very attractive one either. Some prominent official occupies a half hour in wearisome generalities, never seeming to notice a restless and bored audience. Why, the poorest primary teacher there would be a bright and shining light, talking out

from the wealth of her experience, compared to the speaker who is giving the coldest theory and couldn't "hold" a primary room a half hour if he tried. Yet teachers are blamed year after year, for not flocking to these public meetings like doves to the windows. But teacher-like, they silently submit to be talked down to, and the farce of bringing another man, educationally or temperamentally dead, to instruct (?) at these meetings is repeated year after year. It is a brave man, after all, who attempts to talk to a body of live primary teachers.

Thought Translation.

The Basis of Elementary Education.

By J. H. PHILLIPS, Ph.D., Birmingham, Ala.

THE keynote to the educational methods of the past, still remains the keynote of modern education, — the translation of thought. The value of this principle in its application to primary and elementary education has not been sufficiently emphasized, and the child too often handles mere words instead of ideas. We have at least four great languages, or forms of expression, in which we find ideas embodied and in which the child should be instructed. The acquirement of thought and its correct expression by the child, constitute the teacher's chief aim. Ideas are acquired and mastered only so far as they may be adequately expressed. Thought expression then becomes the chief work of the school. Upon examination it will be found that there are only four important modes of expressing ideas,— four separate languages, we may call them, by which all ideas may be expressed. In order to obtain the mastery of ideas, and to acquire facility of expression, the child must be trained in these special modes by means of thought translation. These modes may be briefly stated as follows: 1. The Objective, — Making; 2. The Representative, — Drawing; 3. The Oral, — Speaking; 4. The Symbolic, — Writing.

1. *The Objective.* Ideas embodied in material form constitute the basis of a child's education. The organic senses acting upon his material environment are the primary media of instruction, and the foundations of education are laid through observation and experience. By observing and handling objects, and by constructing new forms from materials placed at his command, the child advances in the knowledge of this primary language of nature and acquires greater facility in its use for the purpose of expressing his own ideas. As the child learns to invent, to construct, to make with his own hands, his power of thought expression is materially strengthened. This is peculiarly the language of of the kindergarten and of the primary school, but no class from the kindergarten to the college can afford to dispense with it. It necessarily embraces the study of form and color; it exercises the creative faculty and covers the entire field of industrial and mechanical acquirement.

2. *The Representative.* Next to the object itself the child recognizes its picture and is attracted by it. Drawing thus forms an important vehicle of thought, — a distinct mode of thought expression. Indeed the language of drawing enables us to give expression to many ideas that cannot be clearly and adequately expressed in any other way. It is representative, and therefore an indirect means by which the child may express thought under certain conditions and limitations.

3. *The Oral.* Oral language is a direct mode of expression, and facility may be acquired only by exercise. After the picture of the object, naturally oral description is introduced. The study of the object, for the purpose of translation into the representative form, facilitates the further translation of the thought into the form of oral or verbal description. The correct reproduction of ideas in good English must always be a leading aim in every branch of primary work.

4. *The Symbolic.* The relation between the written or printed word and the spoken word is similar to that existing between the picture and the material object. In the former, however, the relation is that of a conventional symbol of vocal sound, while in the latter it consists of certain distinct points of resemblance or correspondence. The transfer of ideas from the oral to the written form of expression,— or the reproduction in writing of correct oral description, forms no small part of the work assigned to the child in the elementary school, and facility in this, as in the other modes of expression, is to be acquired only by constant practice.

These four modes of expression, — making, drawing, speaking and writing, include all the primary modes or vehicles of intellectual expression, and constitute so many languages in which the child should be instructed. Thorough elementary training implies facility in each of these modes of expression. The child must have abundant exercise in the translation of thought from one form to another. He may begin by modeling a cube or a sphere in clay; he may express the same concept in the language of drawing; let him again translate the same concept, either from the object or the picture, into the form of oral description, and finally reduce this description to writing. The four available forms have thus been used as vehicles for the same thought. The process may be reversed and the child may be required to make or draw the object from dictation, or with the written or printed description as a guide. Whatever the exercise or the subject placed before him may be, the child is still a translator of thought,—he abstracts the idea from one vehicle and conveys it to another form. In each subject, the translation of thought through the four fundamental forms of expression, will form the essential key to successful work. In primary reading, the teacher, beginning with the objective, proceeds successively through the representative and the oral to the written or printed form. The material object, the picture, the spoken name, and the written or printed word, form the steps of the tyro's ladder to the art of reading. The value of oral or written reproductions of the reading lesson depends upon the extent to which thought is abstracted and re-embodied in the child's own words. Mere verbal reproduction is worse than useless. Reading as an exercise in the higher grades requires knowledge from observation and experience of the objective realities imaged forth by the words; the printed form suggest mental images which may be reproduced at will, orally or in writing, with variations characteristic of the individual. In geography also, the same order prevails and the same principle underlies successful work. The objective, — knowledge of material forms, divisions of land and water, etc., is fundamental; the representative follows with pictures, drawings and outline maps; then the oral description or the translation of the printed description into the oral or representative form. If this principle is observed in the study of geography, and the proper conception of natural forms and political divisions is first impressed, there will be fewer children in our schools who will point upward and downward when asked to give the directions of north and south, or to speak of one state as *blue*, another *red*, and still another *yellow*, because they chance to have these colors associated with them on the map studied. These modes of expression as applied to reading and geography, will be found equally effective in their application to arithmetic, language and history. In all subjects let the primary idea of thought translation be constantly kept in view by the teacher and there will be less of mere *memoriter* work, and fewer parrot-like reproductions of text-book definitions of which the child understands nothing.

By adhering rigidly to this principle in the primary grades, the child will be trained to observe closely, to compare forms and qualities, to reproduce accurately, to express ideas cogently and fluently, to execute skillfully, to reason from facts to conclusions. The habit of thought abstraction by means of translation will grow into a power which, in time, must dominate all his intellectual efforts. In all exercises, next to the apprehension of thought, accuracy, conciseness, and facility of expression are to be emphasized. The use of so much written work and the introduction of drawing and industrial training, find their justification in the increased power brought to the child's aid in the manipulation of thought.

Literature in Primary Work.

By Elizabeth Share, Training Dept. State Normal School, Spearfish, South Dakota.

THE best in literature ought to be a part of every child's inheritance. If we leave that out of our primary work, the large majority of children will go through life with no knowledge of the beauty and grandeur of the world's great thoughts. Few homes offer this stimulating mental food. The schools must do it. If character building is to be the one aim of our work, the underlying principles of ethics can be taught most effectually through literature.

In order to present these truths to the child, we must know what forms of literary expression appeal most strongly to him. There are three modes of expression by means of which we may lead him to the knowledge of the great moral forces in life.

In the *fable*, or *myth*, truth is presented to him through the imagination. The childhood of the race was nurtured by myth and allegory. Each child passes through the same stages of development that the race did. The same imagery appeals to him in which our ancestors clothed their knowledge of truth.

This truth need not be pointed out to the child. He will intuitively grasp it. I have heard a child of seven add the moral, "So we must not tell a lie," of her own accord, after telling the fable of the boy and wolf. Children will not fail to tell you why they love "Little Gustava," in Celia Thaxter's beautiful poem. "Because she is kind to her pets." "She is not selfish or greedy." These expressions of their appreciation of the truth embodied in the fable, or poem, will come without doubt, if the teacher wisely guides the thought of the child by her own manner of telling or reading the selection.

In the historical anecdote, the child sees the universal truth in its relation to conduct. The life element in history will be the prominent thought in his mind when the years of historical study come, if he is early introduced to these "golden deeds." It will not be a dry collection of dates and facts. In it, he will see the development of man towards higher ideals of life and duty. Moreover, if he never reaches the study of history proper, he will have the great deeds of time in his mind from which to deduce his principles of right and wrong.

Poetry presents spiritual truths in their highest expression. Children appreciate this expression. No one can doubt it, who has ever watched the intent faces and kindling eyes of children while listening to some of the poems or ballads, that celebrate noble deeds, or heroic attempts.

The myth, the historical anecdote and the poem make a trio of forces, strong in their power upon the moral life of children. A few practical suggestions as to *how* this line of work may be carried out, may help some earnest seeker after the best for her pupils.

First. The *teacher* is the all-inspiring element of success. The work must be illumined by her keen and happy appreciation of the power of literature in teaching moral truths. She herself must know the joy of communion with the great minds of all ages. Her one desire will then be to share it with others. For the *children*, this communion on her part must be all the closer. She must imbibe the spirit of the literature that *lasts* in deep health-giving draughts, that its touch upon her life may awaken the children's souls.

A teacher, who thus works for her children, *grows* day by day in mental strength and spiritual insight. "Come, let us, leading the children, enter into life."

Second. The piece of literature selected for work, should, so far as possible, be presented in its completeness. It is the *spirit* we want the child to gain. That is lost by minute study of details. We want to work to inspire life, to present ideals clothed in beautiful language. Let the truth find its perfect way into the lives of the children through the selection, without too much of our weak explanation. Perhaps, there are lines or even verses, that the child may not fully understand now. Let him *grow* into the understanding; they will mean all the more to him at the last.

Third. Some of the poems and the substance of the stories should be committed to memory. The form of choice words thus stored in the child's mind will be the foundation for a vocabulary wherein are found beauty and power. It is said of Rufus Choate, that he formed the habit when a boy, of committing to memory the striking passages, or lines of everything he read. He attributed much of his power as an orator to this habit.

Fourth. In the *unification* of work now emphasized in all good primary schools, the literature work should be the center for a part of each year. Around it let the language and reading cluster. Even the number and form work can be brought into harmony with it. The strength of every subject is more than doubled by this unification. The teacher's time and power are saved by concentration. Her work is made beautiful and systematic by this orderly array of all work around one central thought. It then presents itself to the world for what it really is in spirit — a unified attempt to guide opening souls into paths of right living and thinking.

Underlying Meaning of the "Gifts."

By Helen M. Lathrop, Montclair, N. J.

AS Froebel drew nearer to Nature's heart he realized more and more that only in following her laws can we hope to attain geometrical development. In the form of the First Gift, therefore, we see the symbol of the beginning of all life. It would seem that the purely physical responds when the child is presented with the bright balls. The color, warmth and motion appeal to and satisfy his sensuous nature and for a time he sees only a new toy. Soon, however, his *memory* is quickened and he names many objects in quick succession as the result of a request to "close your eyes and think of something like your ball." This gift is rich in suggestions; the earth, vegetable life, the rain-bow and rays of light may all be comprehended by its use.

In the Second Gift the child will at once be attracted to his old friend, who in its changed dress has acquired a new name. Here he takes a lesson in caution, for the hard polished *sphere*, may not be handled as was the soft, warm *ball*. In comparing sphere, cube and cylinder he awakens to the vast difference in objects; his reasoning power developing as he makes impressions in sand or clay and discovers that space of a different form must be made for each. In clay he evolves cube and cylinder from the sphere, demonstrating clearly their relation.

In the Third Gift the child has the analysis of the cube just considered as a whole. His eye trained to quick perception, takes in the likeness, and he calls the little blocks "cubes" at once.

As aids to mental effort the Third, Fourth, Fifth and Sixth Gifts are invaluable. All the simple combinations in number being possible, while a good foundation for fractions may be laid in the divisions of the cubes, demonstrating the first steps in mathematics, in an easy, natural manner. In following dictation, concentration of thought is necessary, for the child must make *his own* each direction given if he would hope for success. He imitates, invents, reproduces from memory or builds imaginary castles, naming each form as it appears.

Thus as his hand and eye acquire skill and accuracy, his imagination is stimulated and the power to express thought cultivated. In using these Gifts he develops much in patience and perseverance, while a respect for the rights of others is gained as he resists the temptation to meddle with a neighbor's property.

The Seventh Gift does not confuse by any radical change. for the square and triangular faces of the planes are familiar, In working with them he exercises the same faculties as in the preceding gifts, but now he is an *artist*. He enjoys laying the symmetrical patterns because so easily reproduced on slate or paper. Calculation enters largely into this work. Seeing, mentally, a design he wishes to produce, the child must calculate what he needs to complete the effect, each

effort of this kind going toward the strengthening of his mental powers.

Paper folding and cutting are related as occupations. In the slats of the Eighth and Ninth Gifts the child considers only *length*. With the first he is able to show the vertical, horizontal and oblique positions; angles and many other forms of knowledge being beautifully illustrated.

With the Ninth Gift he weaves and plaits, making frames, card-racks, and the like, while with colored paper he weaves beautiful patterns.

The Tenth and Eleventh Gifts bring us to the *line*, represented by sticks of various lengths, rings and half rings. Here the foundation for linear drawing is laid; for illustrating outlines of buildings, architectural designs and in number work, the sticks are admirable.

Dictation is more difficult to follow, hence the power to concentrate thought and the ability to execute increases. In designing with the rings, the curves add greatly to the beauty, while number is more difficult, as the child has to calculate with halves. Grace and symmetry characterize this work, and a love for harmony and beauty is the natural outcome. Sewing, perforating and drawing are related.

SARAH L. ARNOLD,
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In the Twelfth Gift, the string, the child has for the first time material which he can manipulate at will, but so imbued is he with the connection and relation running through his work, that he makes squares, triangles and circles as a matter of course.

In contemplating the last of the gifts we come to the *point*, fitly represented by the seed, the end as well as the beginning of life, for after fruition the seed appears again. One of the most beautiful lessons inspired by the Thirteenth Gift is the principle of life. The knowledge that within the little withered seed is a germ, which will produce a living plant, is gained by actual experience, and the child will probably never see a plant or flower without a nunconscious uplifting of his heart to the Creator.

In working with the gifts the will power is constantly developed, but in such a way that it is subservient to law, and the continual appeals made to his sense of right and justice impress the child with the importance of "fair."

Through all this work as well as the "play" of the kindergarten, is woven a spiritual thread which brings him in touch with God, Nature, and the whole world.

"There are bits of poetry in my mind I learned in infancy which have stood by me in keeping me true to my ideas of duty and life. Rather than lose these I would have missed all the sermons I ever heard." —*Pres. Eliot.*

How to Grow.

"Grow as the trees grow,
Your head lifted straight to the sky,
Your roots holding fast where they lie,
In the richness below;
Your branches outspread
To the sun pouring down, and the dew,
With the glorious infinite blue
Stretching over your head.

Receiving the storms
That may writhe you, and bend but not break,
While your roots the more sturdily take
A strength in their forms." —*Selected.*

A Lesson on the Frog.

By M. A. B. KELLY, author of "Leaves from Nature's Story-Book."

AS far as we are able, we should give the children an opportunity to study the life-forms of nature. Pictures serve our purpose well, when we can do no better; but the living animal or plant, its size, its home, habits and growth, these convey to the mind of the child that clear and complete idea of the thing that we so much desire to impart.

To-day, we will bring a frog into the class. These animals are readily obtained at this season of the year; and there are always some boys in the school who will gladly capture one for us.

We will confine our living specimen in a course net, and this net we will put in a broad, shallow pan, partly filled with water. Placing the pan on the desk before us, we raise the net so that all the class may see it, and ask, "How many of you have ever seen an animal of this kind?" There will generally be a number of hands raised; while some members of the class will say that they have seen only a picture of it.

"Have you known the frog to bite or sting anybody?" It will not be possible to name a single instance; and the fact that the teacher handles the frog without fear, strengthens their belief that it must be a harmless little animal.

After a time, volunteers may be called upon to come to the teacher's desk, and put their hands on the frog's glossy coat; it will not be long before every member of the class will, in a similar way, lose all feeling of fear or repugnance; and by the time the lesson has reached its close, they will know more about the frog and his family than they could possibly have gleaned from their teacher's statements, from their books, or from the combined aid of both.

We must see that they observe carefully the color of his skin, and that they notice the difference between the gay coat upon his back, and the more subdued shade of the plain vestment that covers the under portion of his body. All these features should be talked over, and fixed in the mind; so that they may be able to bring in, a day or two later, a short essay or story upon the subject.

Now, taking the animal out of the net, and holding him securely in our hands, we will begin the study of the head. (It is to be hoped that the sensible teacher will have no more fears about handling this harmless object than she would have in handling a fish.)

Notice, back of each bright, bulging eye, a little prominence where the skin stretches over a hard ring. These are the ears. Note also the large openings of the nostrils; and let the children watch the slight, trembling motion of the

muscles about the throat. In this way, they will learn for themselves, that by the aid of these muscles the animal draws in the air through his nostrils.

But how does the frog make his queer croaking noise? Here the children must be told that on each side of his throat there is a small bag or sac; and whenever he croaks, or calls to his mate, this sac is filled with air. It is called the "croaking-bag," and it is chiefly the male frog that makes the music.

The class should be encouraged to ask questions, and to talk freely and familiarly about the lesson. Have you ever heard a frog croak? At what time of day? Have animals a language of their own? Do you know any other class of animals that have a way of calling to one another?

Now open his wide mouth, and put in a small wedge. The children will discover that he has no teeth on the lower jaw; and that the upper jaw has only a row of very minute, horny spines. A closer examination will reveal a row of similar teeth on the middle of the palate; but the class will generally have to accept this fact on testimony. They should examine, very carefully, the animal's tongue; and they will

Head of Frog.

find it fastened to the front part of his mouth, instead of the back part, like our own; it is also somewhat forked, and the frog is able to dart it in and out, very rapidly, whenever he is capturing insects on the wing.

By way of illustrating the kinds of food on which he lives, the class may be told that frogs will follow fishermen who are digging for bait; and as soon as a wriggling angle worm appears above ground, they will leap after it, and gobble it down quickly. These animals will also prey upon one another, the larger frog devouring the smaller one, without crushing it in any way before gulping it down.

Now let the children press down upon the frog's body, and they will find it very soft and yielding; and they may here learn that it is an animal without ribs. Next, the short fore-legs are to be observed, and we find that each foot has four pointed toes. The class will readily see, on looking at the hind legs, that they are very long, and that each foot has five toes, connected by a web.* They will infer too, without questioning, that the long legs are for leaping, and the webbed feet for swimming. In fact, there is little concerning this lesson, that the children may not find out for themselves. (In our next lesson we will take up the babyhood of the frog.)

*If the teacher has a microscope, it will afford the class great delight to observe the capillary circulation in the webbed foot.

"Little Drops of Water."

Here is a brief account of the woman who wrote the little verse:

Little drops of water.
Little grains of sand,
Make the mighty ocean
And the pleasant land.

Julia A. Carney is now about 70 years of age. She lives near Galesburg, Ill., with her grown up sons. She was recently asked for a portrait of herself by an interested visitor. "For nearly fifty years," she replied, with the utmost good nature, "I have given one answer to hundreds of such requests every year, and that has been, and must always be 'No.'" "Little Drops," she continued, "was written by me merely as a class exercise when I was a member of the teachers' class in phonography in the old Tremont Temple, in Boston, in 1845."

Apple Blossoms.

O bare boughs, patient boughs,
Bravely ye bore and well,
While April sobbed with dreary wail,
And May's reluctant smile was pale,
And spring rehearsed her spell
In vain and found its potence fail;
And bird and bee and flower were fain
To turn to winter's sleep again.

O brave boughs, rewarded boughs,
Ye waited not in vain!
To-day in all the orchard rows,
With flush of snow and flush of rose,
Laugh all your lengths again,
And borne on every breeze that blows
Such fragrant breaths stir overhead
As only happy hearts can shed.

So, dear boughs, helpful boughs,
Clasp tight each petal fair,
Hold it on high till all shall see,
And sad hearts passing heavily
Read, traced in scented air,
The lesson bravely learned by thee —
That all good things or soon or late
Shall come to him who dares to wait.

— *Susan Coolidge.*

Jack Knife Carving.

Third Grade.

By Caroline E. Kilbon, Springfield, Mass.

In carving it is very important that the point of the knife be kept sharp. It should be so sharp as to make a cut that is smooth and deep without great pressure on the knife. If the edges of the cut are rough, in all probability it is caused by the dullness of the knife. A knife carefully handled will remain sharp for several lessons.

The children need to be cautioned about dropping the knives on the floor when opened or sticking the knife point into the desk or in fact doing anything except to carve with them. In carving lines that cross the board as in Fig. 1 special care is needed in finishing the cut. When the

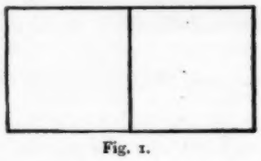
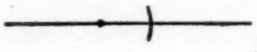


Fig. 1.



Ill. 7.

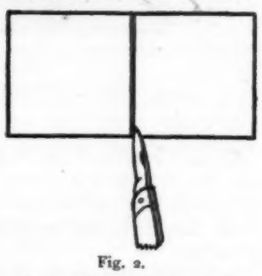


Fig. 2.

knife reaches the last $\frac{1}{12}$ inch bring the handle forward and downward as in Fig 2. If the knife is allowed to fall from the board to the desk, it not only mars the desk, but dulls the knife very much, and often breaks off the point, thus rendering the knife useless for carving until it is ground.

In response to the requests for original designs, mentioned at the close of the last article, several were brought in. One of them (Fig 3) was copied from the border of a window shade. Figs. 3, and 3 and 4 in March Primary Education (photographed work of children) show the three best designs.

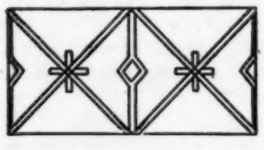


Fig. 3.

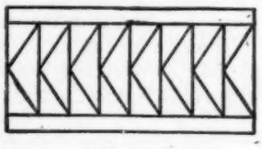


Fig. 4.

From the original designs which the class make a teacher may select the best two or three and give them to the entire class

on successive lessons; or each pupil may lay out and carve his or her own design. If the latter plan is used a simple design may be placed on the black board to be laid out and carved by those pupils who have failed to bring an original design.

If the class seem to need further drill in carving straight lines before undertaking curves, a great number of designs may be devised. But let the designs for carving follow along with the regular school drawing, in order that each may help the other. Fig. 4, 5 and 6 are a few suggestive designs.

Fig. 5.

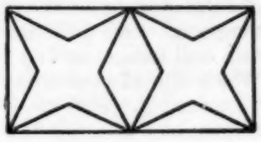


Fig. 6.

This morning, children, we shall begin curves, but first let us make a border of lines $\frac{1}{8}$ inch from the edges and from the ends as in Fig. 8. Next set the dividers $\frac{1}{4}$ inch. What do I mean by setting the dividers? Yes, placing the steel point and the pencil point of the dividers $\frac{1}{4}$ inch apart. (If the class have never used dividers before it may be well to give them instructions in setting them as follows. Draw a straight line on paper. Direct the class to set the dividers at $\frac{1}{4}$ inch. Then place the steel point on the straight line and make an arc cutting the line as in Ill. 7 (see above). To prove the setting let them measure from the centre to the arc, and see if the distance is $\frac{1}{4}$ inch. Repeat with different settings of the dividers). We will now describe curves on our work. Where the border line which was drawn $\frac{1}{8}$ inch from the right end crosses the line which was drawn $\frac{1}{8}$ inch from the lower edge, place the steel point of the dividers and describe an arc, between these two lines. Fig. 8. Set the dividers

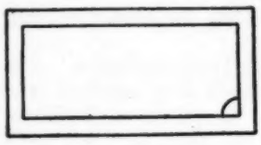


Fig. 8.

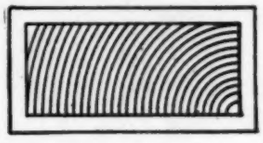


Fig. 9.

at $\frac{3}{8}$ inch. Place the steel point at the same place as before and describe a second arc. (In the same way, increasing the radius $\frac{1}{8}$ inch each time, continue as in Fig. 9.)

Carve first the border lines. Then carve the arcs, beginning with the last arc you described, that is the one farthest away from the centre which you used. Carve the arcs in order and finish one at a time. After you have finished an arc see where you made mistakes and do the next one better.

Cut the inner side of curves first. (This is a direction it is always well to observe, especially in small circles. If the outer side of the curve is cut first, it loosens the wood where the curve is tangent to the grain so that when the inner side of the curve is cut the piece of wood tangent to the grain, is apt to fall out.)

In cutting the curves, children, turn the board slowly around being careful to keep the knife always at the same distance from the line. Let the knife move steadily forward and not by jerks (a point that will need enforcing.) You will need to be careful in carving curved lines not to hurry.

"Alice Parker was a little girl six years old. She had a dimple on her left cheek. Her friends sometimes called her "Dotty Dimple."

Teacher.— "I wonder why she was called "Dotty?" I can understand why she was called "Dimple." (Silence from the class.)

Teacher.— "Can any one tell?"

Small boy.— "Because she had freckles."

"Now," said the teacher, "Suppose I should give you and Johnny an apple, divided into four parts, and Johnny was to take two of the pieces, how many would you have left?" "None," answered the little girl. "None?" echoed the teacher; "I'm afraid you don't know the lesson." 'Tain't that, ma'am; you don't know Johnny."— *Selected.*

Memory Gems.

By E. A. B.

A TEACHER said to me not long ago, "I'm going to teach the children to recite that little poem about the kitty, it will sound so cunning when we have visitors." I smiled sweetly but sadly, and said nothing; how could I?

That evening I looked over my volumes of poetry, to see if I could find something that would answer the double purpose of "sounding cunning," and being a real benefit to the children as well. Is it our business to entertain visitors at the expense of the child's culture and appreciation of the beautiful?

I have spent much time recently in visiting schools and I find the majority of teachers have somewhere on their programmes five or ten minutes each day devoted to memory gems. Frequently, I am entertained by a poem recited in concert, about a cat or a grasshopper, a few desultory quotations from the Bible, which are far beyond the comprehension of the children (which the teachers are bound by law not to explain), and a song describing the manner in which we perform our toilets. Is this in any way elevating or ennobling? Do you find any gems in the collection?

Gems are precious, valuable, worth possessing and keeping; paste is an imitation of the gem easily distinguished by the practiced eye.

Let me tell you what I did. I went to the library with pencil and paper, looked over Whittier, Longfellow, Ingelow, etc., and made a list of all the poems, which I thought the children could learn and understand, and which would give them a higher standard of poetry than most of them were able to get at home.

The result was astonishing, try it. I found at least, twenty beauty-giving poems and I know now, by experience, that the children love them.

The babies in our first grade lisp "The Baby," by George MacDonald. You should see their "three-cornered smile of bliss," it is "cunning" and the poem is a classic.

In the second grade, the children are learning Jean Ingelow's "Seven Times One." It will serve a double purpose because, besides being a rare gem, it will be a good peg on which to hang many lessons. Our elementary science has taught the phases of the moon and the fancy that she has done something wrong in heaven, so "God has hidden her face," adds beauty to the otherwise bare fact.

Our third grade has mastered "The Brown Thrush," by Lucy Larcom, and the little German lullaby, "Sleep, Baby, Sleep!" We mean to try "The Children's Hour", by Longfellow, next.

Are we not too selfish with those prettily bound volumes of poetry on our book shelves, and too generous with the educational papers on our tables? Let us introduce the children to some of the authors we know and love, instead of teaching them poetry with poor rhyme and worse rhythm, written by persons of whom we know nothing.

It becomes a question of gems *versus* paste, and it will be useless to vote, for everyone knows that teachers are fond of diamonds.

The following is a list of poems that seem to me suitable for use in the primary grades:

"The Baby," by George McDonald. "The Children's Hour," by Longfellow. "Seven Times One," by Jean Ingelow. "Seven Times Two," by Jean Ingelow. "The Brown Thrush," by Lucy Larcom. "All Things Beautiful," by Mrs Alexander. "The Captain's Daughter," by James Fields. "Daybreak," by Longfellow. "Barbara Frietchie," by Whittier. "First Snowfall," by Lowell. "Sleep, Baby, Sleep," from the German. "Little Birdie," by Alfred Tennyson. "The Brook," by Alfred Tennyson. "Who Stole the Bird's Nest," by Maria Child. "Thanksgiving Day," by Maria Child. "The Children in the Moon," Anon. "Good-night and Good-morning," by Lord Houghton. "In School Days," by John G. Whittier.

Colonial Schools.*

By Mara L. Pratt, Author "American History Stories."

FROM the very beginning there were schools; for the pilgrims and the later colonists loved learning and were determined their children should not grow up *unlettered*, as they called it. The very first schools, the kind Baby Peregrine attended as soon as he was old enough to walk and talk, were held in the cabins. The good women who taught the children, being like all these foremothers, thrifty, time-saving women, often went on with their housework while the children did their "sums" or recited their lessons. There were so few pupils, and so little to be learned, why shouldn't they? Certainly they saw no reason why they should not, so long as one eye was kept on the mischievous little ones at work.

A Home School in Colonial days.

But by and by, as the colonies grew larger, teachers were hired by the people, little school-houses were built, and the children gathered together a few months in the year to *get a schooling*. Sometimes the teacher was a woman — especially in the summer time when the big boys were at work in the fields and only the girls and little boys could attend.

To these schools the girls carried their work-boxes and learned to sew while the boys did hard sums in the big arithmetic. There was no need for the girls to learn very much, so these early people thought. A little reading and writing, and a great deal of spinning and sewing, was what was best for them.

And as the teacher herself did not know very much, she of course could teach the boys only while they were quite small.

Their letters, their songs, and their verses, they learned from an odd little book called the "New England Primer." All the children in all the colonies used the same book.

The teachers in these days believed in punishing children when they did wrong. One teacher, Mistress Tileston, who taught in Boston long, long ago, would go up and down the aisles in her little school-room tapping sharply upon the heads of idle boys with a rough steel thimble which she always wore.

Mrs. Diaz, who has written much about her own early school days—(and the schools even as late as fifty years ago had not changed very much) says: "Mistress Leonard had a faculty for contriving punishments. For example, when little Sethy Cushing tied his scarf around a kitten and hung it on the clothes-line, she tied the scarf around little Sethy Cushing, and hung him on the crane in her great kitchen fireplace, which was not at that time in use.

"Scholars who told lies had mustard put on their tongues. When a little girl stole a vial of boxberry cordial from one of the other children, Mistress Leonard held that little girl's fingers over the red-hot coals.

A punishment in Colonial days.

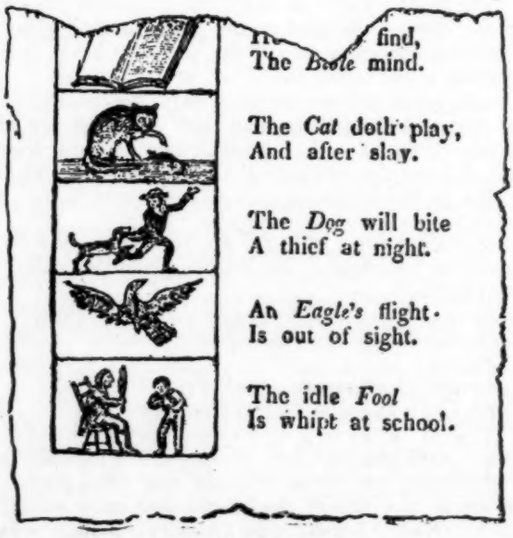
"This teacher had other ways, too, of helping us to avoid evil and turn to the good. She had always a little, thin oval locket marked *Best Scholar*. Which she allowed us to wear when we earned it. She also had bows of ribbon, blue and red and pink — *and black!* All good children went home with the bright colored bows pinned upon their shoulders. The child that had behaved very badly, wore home the black bow.

"I must not forget our Catechism — or Catechise, as Mistress Leonard called it. 'Stand up and say your Catechise!' was Mistress Leonard's first order in the morning. At that we all stood in a straight line, our toes exactly on the crack in the floor.

"The questions were put in a high pitched voice, very fast, and we were expected to answer equally fast.

"The 'Catechise' contained one hundred and seven questions, their answers, the Lord's Prayer, the Ten Commandments, and the Creed. Some of the scholars knew the book through, and the 'Primer' besides.

"The 'Primer' was a thin book, about five inches long and four wide, with blue covers and leather binding. It had a woodcut of John Hancock, and a number of very small woodcuts, one for every letter of the alphabet. These were placed up and down the pages, six in a page, at the left-hand side, each with



A leaf from the old "Primer."

*Copyright, 1893, Educational Publishing Co.

its couplet at the right. Thus, for 'A' there was the couplet,

'In Adam's Fall
We sinned all.'

"In the picture there were two droll-looking human images, whose bond of union seemed to be an apple, which both of them were holding. They stood close to a tree. It looked like a cedar or a hemlock tree, but we knew it to be an apple tree, because there were apples on it. We were sure they were apples, for we had heard the story again and again. Around the trunk was coiled a serpent, so large, that with only two coils it reached from the ground to the branches.

"For 'O' there were three human images, two of them with crowns and sceptres, and the triplet,—

"'Young Obadias,
David, Josias,
All were pious.'"

Once in a great while the "committee men" would visit the school. When they did, it was a great day. If the president of the United States and all the governors should enter your school-room you would not be as awe-struck as were these little school boys and girls of so long ago.

The committe men always heard the children read. They looked over the writing books, frowning severely at the blots, if there were any; then taking the spelling book in their hands, they heard the children spell. The bigger the words they could spell, the better scholars were they supposed to be. "Ahem, ahem!" the committee man would say, straightening up very tall and looking very wise. "Spell *intercolonial*."

"I-n in, t-e-r ter inter, c-o-l col intercol, o-n on intercolon, i i intercoloni, a-l al intercolonial," the pupil would answer in a very shrill, high-pitched voice. For this is the way children were taught to spell *and to pronounce their syllables* in "ye olden tyme."

"Ahem, very good," the committee would say in a patronizing tone.

On the very last page of the spelling book were columns of *hard words* — words with *silent letters*. Happy was the child that could spell that page for the committee man. Such a child's standard of scholarship was settled forever.

"Can you spell phthisic?" the committee man always asked when the school had been "spelled down" on all common words.

"Ph-th-is-ic," some child would answer, jerking the letters to keep the rhythm.

"And Mississippi?"

"Mis-sis-sip-pi," was the answer in the same jerky tone.

If the children *stood fire* on spelling, and then could tell how much *a herring and a half at a cent and a half apiece would cost*, that school was believed to be a success, and in the town reports, that teacher was said to have "kept a good school."

One crowded hour of a glorious life,
Is worth a world without a name. — *Scott.*

Buttons.

"Button, button, who has the button?" asked a glove that had been dropped on the toilet-table.

"I've got it," answered Jimmy's jacket. "I've several buttons in fact."

"No," put in the closet door, "I have it myself; the carpenter gave it to me."

"I had a dozen or so," said a boot looking down at the heel.

"And I have a hundred or more," yawned the easy chair "but they don't button anything; they don't belong to the working-class."

"Here's a bachelor's button," remarked a vase of flowers on the bureau.

"There's a button-wood tree in the garden," said the button hooker. "I suppose you all grew there."

"I know better than that," pouted the closet door. "Mine grew in the veins of the earth, where all the precious metals are found. It's a poor relation of theirs." "And we" added a pair of ivory sleeve buttons, "we grew in the land of the white elephant. We were carved from the tusks of the leader who threaded the jungles and swam the rivers at the head of the troops." "My buttons," said the glove, "were nearly related to the gem which Cleopatra dissolved for Antony. They were mother-of-pearl, grown in the shell of the pearl oyster, for which divers risk their lives."

"That's something of a fish story," thought Jimmy's jacket. "My buttons are only glass, but glass is sometimes made of sand, and who knows but what their atoms may have been swept down to the seashore from 'Farthest India?'"

"And I" whispered the bachelor's button, "I sprang up from a tiny seed, with all my splendor of blue and purple wings, like the Afrite from the jar which the fisherman found on the beach. It is a miracle how I was packed away there!" — *Mary N. Prescott.*

I found this story most helpful; it is full of suggestions, that lead one into science, history and fairy-land.

BERTHA KUHN.

Primary Writing.

V.

By ANNA. E. HILL, Supervisor Penmanship, Public Schools, Springfield, Mass.

Tracing Lesson.

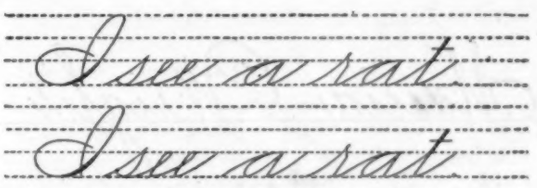
Who can read the story on the tracing leaf this morning? Well, Oliver, you may read it. "*I see a rat.*" I will write it on the board and trace it with you.

Some of the children may stand at the board where the story is ready for them to trace over it.

Ray, you may count the *I*.

"One, two, three." That is right.

One part of the capital *I* looks like something good to eat, something that makes little boys and girls sick when they eat too much of it.



A water melon, the children say. Stanley says it looks like an egg to him, Bessie thinks it looks like an oval.

Are we going to write this story, Roland? "We are going to trace over it first."

What do you mean by tracing over the lines, Roland? "Making our lines right over those in the copy."

You can think of your pencil as a small boy who is trying to walk over some water on a very narrow plank and if he runs off the line or plank, he goes splash into the water.

Shall we trace all the *I*'s, Ralph? "No, we leave one for a copy to look at when we write." Now we will trace the five *I*'s.

All the children who have traced just over the lines have made five perfect letters, now see how many can make five perfect ones on spaced paper. One, two, three, now another, one, two, three.

Here is a little boy who, like Columbus, is trying to make the egg part of his letter stand on the end of it, and Nellie is making the egg part of her capital *I* like a round ball. An egg the shape of a ball would look funny, would it not, Nellie? We will make the other four and see if we can't make them better.

Now we will trace the word *see;* Ethel, can you count it? "I think I can;" *one, two, dot, one, two, one, two, one.*"

Mabel, can you tell me why we make the dot on the *s*?

"You told us once it was the same as if we tied a little knot in it to hold it together." So I did, I had forgotten that.

Why do we count *one, two,* for the *e*? "Because it has two lines." That is right, Stanley.

Now we will trace the word *see,* and sometime I will tell you what one side of the *s* reminds me of every time I look

at it. You may tell me at the next lesson what you think it looks like. How many kept just on the blue lines; (the copies to trace are printed in blue ink.) I am glad so many did.

Were these letters all the same height, Mabel? "The *s* is taller than the *e*; my teacher told me one day that the *s* and *r* were older brothers of the short letters."

Do you think you can write the word *see* so it will look like the one we have traced? "Yes, I think we can," Mabel always think she can and that helps a great deal, children.

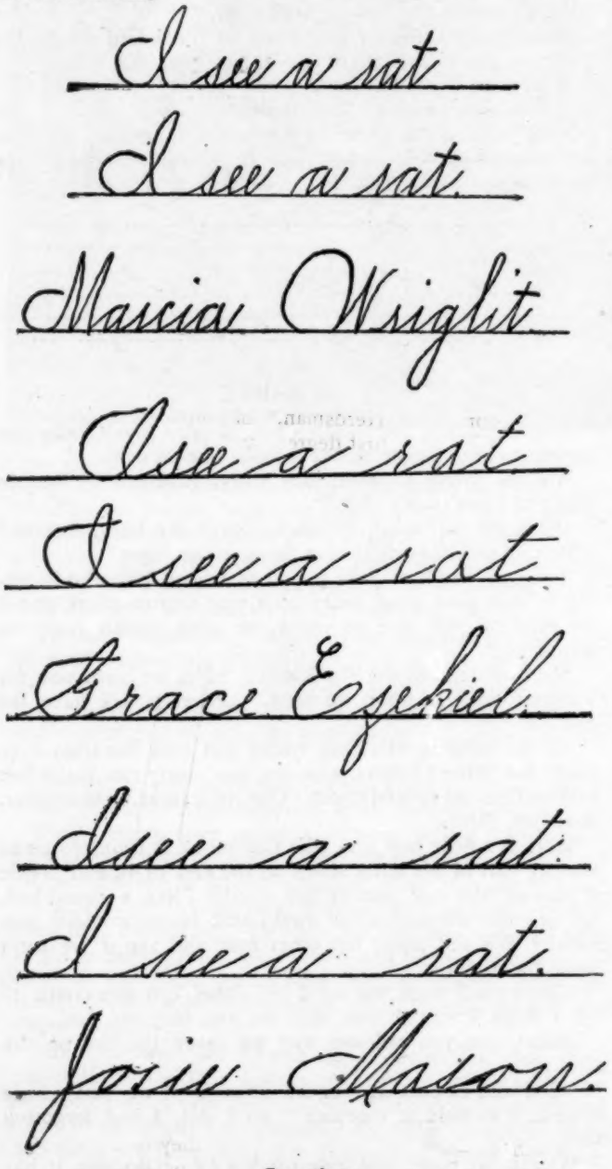
Next we will trace the small *a*. We must learn to make the *a* very well indeed because it stands alone so often, and would feel badly not to look well. This letter also reminds me of something, I wonder if it makes you think of the same thing.

The word *rat* is to trace now. If we had'nt this to trace I am afraid we could'nt write it at all. How many lines in the *r*, Tom? "Three, when it is in a word." How many do we count for it, Paul? "Three."

The *a* we know about. *The* has how many counts, Minnie? "Two and a cross, and my teacher said it was a two story letter." Very good, Minnie.

We will count and trace this word as we have the others, and then write it on spaced paper.

(Specimens of children's writing who entered school in September and who had never before used ink.)



Counting.

Counting, if used in the right way, aids the movement greatly, steadies the hand, and helps it along seemingly.

Of course we do not count after we have learned to write, still we must use that even, steady movement which we have acquired by writing to count.

Many suppose we count simply to keep the children together. This is not true; while the count does and ought to make them write in unison, it also gives a movement for each stroke of the pen. When the pupils in a class keep with the count we usually know that (provided they are holding their pens correctly) they are using the right movement on the letters.

Rule for Counting Letters in Words and Separately.

In words the first and last line of a letter is always counted one. Count one for every line. Do not drag in the counting, as this gives the child an opportunity to draw the letters. The lines in tracing and writing should always be made with a movement.

Count for capitals as follows: I, 1, 2, 3. S, 1, 2, 3. T, 1, 2, 3, 4, 5. A. 1, 2, 3, 4. N, 1, 2, 3, 4. M, 1, 2, 3, 4, 5, F, 1, 2, 3, 4, 5, 6. H, 1, 2, 3, 4, 5. K, 1,2, 3, 4, 5. G, 1, 2, 3, 4, 5. P, 1, 2, 3. R, 1, 2, 3, 4. B, 1, 2, 3, 4, 5. O, 1, 2, 3. E, 1, 2, 3, 4, 5. D, 1, 2, 3, 4, 5. C, 1, 2, 3, 4. W, 1, 2, 3, 4, 5. X, 1, 2, 3, 4, 1. Q, 1, 2, 3. Z, 1, 2, 3, 4. V, 1, 2, 3. U, 1, 2, 3, 4. Y, 1, 2, 3, 4, 1.

The small letters: i, 1, 2, 1, dot. u, 1, 2, 3, 4, 1. o, 1, 2, 3, 1. e, 1, 2, 1. c, 1, 2, 3, 1. q, 1, 2, 3, 4, 1. l, 1, 2, 1. b, 1, 2, 3, 1. z, 1, 2, 3, 1. f, 1, 2, 3, 1.

When capitals are joined to small letters in a word the last line is counted one.

Set Gymnastics.

To the Editor: I've come again. So many pleasant letters, sympathetic and congratulatory, have come to me from fellow-teachers since my "Open Letter" to you last month, that I conclude it is not I who have lost mental balance over this literature craze for babies; but that a great body of silent primary teachers are feeling over that matter precisely as I do. They seem to be in the condition of the dear, pious old Quaker lady, whose religion would not let her say anything when the railroad train moved away without her, but who gratefully expressed her thanks to the less scrupulous brother who stood by in the same predicament, venting his indignation in vigorous Anglo Saxon with a "big D."

But such a feeling of emancipation — such a pleasurable sense of "elbow room" has been mine since I burst the conventional bonds of the blindly submissive teacher in the last issue of Primary Education that I come again to speak my mind on another subject.

Physical Education.

I believe in it. I believe in the increased prominence it is having in the schools. I will sign any thirty-nine article creed in the country that puts the culture of the body as an indispensable foundation of all mental training. But the ways and means to secure these well-trained bodies. Ah! there's the trouble.

This is the way it goes. The little folks, entering school at nine in the morning, are seen to grow tired, listless and droopy about 10 o'clock. Program says, "Physical Culture 10-10.5." What does that mean?

First, what *should* it mean? Clearly, a complete change of physical and mental conditions. The little cramped-up restless legs of these growing children should have a chance to unwind, unbend, run about, dance a jig — anything that shall set the blood to circulating and draw it away from their little puckered-up foreheads. Their spirits should bound like a rubber ball, and at the end of five (better ten) minutes, they should be rejuvenated, freshened up little animals, or as Kate Douglas Wiggin would say as "nice a lookin' mess o' children as can be found anywhere."

Now what *does* happen under the present fashion of *set* gymnastics in the schoolroom? (I did not say "fad" leave that to Chicago.) A signal, and fifty wee pairs of legs are supposed to turn into the aisle with military precision. Instead, Johnny's slate goes *bang!* Katie's long pencil rolls to the floor, breaking into three pieces and

putting her in distress; Jane Maria wants to write one word more and so on, till half the time is gone in getting ready to be "exercised." The teacher has grown hurried, nervous and half severe and the children are moving in a half automatic and wholly spiritless state to "get ready."

The exercises themselves? Why, they are just the same as they were yesterday — as they will be to-morrow! How enjoyable! How full of delightful surprises! What a pleasing change of position to stand bolt upright and be corrected and criticized by a hurried, anxious teacher for five minutes, in the learning of stiff, angular movements, wholly unnatural to children! It is a relief for them to drop back again into the little cooped-up benches and have it "over." Luckily, for them, if they have even been able to have a breath of fresh air, without the danger of "a cold" to somebody.

I believe I said the same exercises were used every day. Does that bring some professional brother or sister to the defensive with the term "Day's Order" as an antidote to the monotonous sameness?

The average layman may not know what is meant by that mystical term "Day's Order," but I do — that is, I am sufficiently initiated to be able to put the following question, viz.: "Do the progressive steps included in the "Day's Order," make it more or less difficult for little children to learn, remember and practice these set gymnastics? A class learns one set of movements fairly well; the brain is kindly beginning to register those physical movements and the children are gliding easily into the habit-groove, when — presto! change! Another "Day's Order" is introduced in accordance with the "progressive" plan, and these little legs and arms that began to grow comfortable in the old ways, have to re-adjust themselves to new ways. This goes on day after day till hopeless confusion ensues. The brain cannot keep up.

I watched some young boys play ball in an open field near my window in my spring vacation. I wondered if nature and the laws of modern physiology, as applied to physical culture, were working smoothly together, as I saw these happy-faced young athletes go through every kind of motion with inimitable dash and grace. I saw they did some heavy "heaving" movements, bringing the blood to the region of the heart. Did nature follow these by another — a "slow leg" to bring it back to the extremities, as we are instructed in modern physiological systems? Oh! no, she let the boys alone. "Slow leg" in base ball! The truth must be apparent to everybody that this same Mother Nature can be trusted to give the children correct physical training, and that it might be an excellent thing for their teachers to look on and see how she does it.

It is one of the prettiest sights in the world to see perfectly executed gymnastics, set to music in the schoolroom. No audience can witness it without applause. It stirs the admiration of the most stolid observer. But what has this perfection of drill movement cost? What is the real worth of the apparent success compared to the price paid for it?

What *is* that "price?" Hours and hours of intense weariness, in strained, forced, physical and mental effort to both teacher and children which should have been given to complete relaxation. Nerves, muscles and mind cried out for natural recuperation, and instead, were put under a heavy strain of forced exertion. No teacher has ever brought about these results without being compelled oftimes to resort to a severity that made anything like recreation in the matter, a painful absurdity.

Children must have relaxation frequent and complete from brain-work and from tiresome positions in the schoolroom; They must be able to get these changes in a way to bring them back to their work happy and mentally alert. *This can never be accomplished by our present set gymnastics.*

If grown children are willing to submit to the weariness of military drill in the school-room for the sake of the "show" effect, do let the little children in the primary rooms have the natural exercise and the fresh air God intended for every child to revel in.

Yours for the children,

RACHEL REXFORD.

Nature Studies.

By SARAH E. SCALES, Lowell, Mass.

The robin has built in the apple-tree high;
Low down in the moss dwelt the sparrow so shy;
The wren wove her nest in the jessamine fair;
The oriole hung up his castle-in-air; —
Heigh-ho! how do they know
Every summer to build them just so?

— *Wide Awake.*

Sunlight.

The phenomena of germination, the unfolding of the buds and blossoms, the verdure on every side, all depend upon the sunlight. The rays are now more intense than in winter.

From time to time, as occasion warrants, field lessons should be taken, with the children. On a sunny day, visit a place where a good view of the sky and sun can be obtained. Notice the characteristics of the latter, its shape, size, color, and deduce its use and office in the natural world.

If grass that has been covered by boards, be examined, the use of the sunlight in imparting strength and color will be seen.

Vegetables that have started in dark places, as cellars, will show same features. How it acts on the spirits and health of man is well understood.

Starlight.

Venus is now evening star. A pretty star group is Coronna, or Northern Crown, consisting of six stars, with one of the first magnitude. Above and to the right we see Bootes, or "The Herdsman," of which Arcturus is a well-known star of the first degree, and the fourth in brightness in the whole heavens. These can be readily seen on May 21st, at 8 P. M. in the east.

Underfoot.

In your field lessons teach pupils to notice soils, sandy, marshy, woody, or otherwise, and the growth which accompanies them. Also, that the depth determines the manner of growing, as, for example, grass on the top of a hill compared with the bottom, vegetation in rocky places with that of better soil, or any facts which present themselves to you or the children. Experiment in schoolroom with seeds sown in clay, sand, gravel, loam, etc., and observe the character of the clay, hard when dry, and cold when wet; and that the sand does not retain moisture, or make firm soil, so that a mixture of these materials would be more suitable for garden purposes, than either alone.

Let the children make little flower gardens in schoolyard. Two or three can combine and own together. Plant sunflower seeds, beans, peas, corn, or bring plants from the fields and gardens. Allow full freedom in their care of them. Squash seeds are vigorous growers, and most of those mentioned will survive without care through summer vacation and delight the children on their return in the fall.

Minerals and Rocks.

A knowledge of some sort, if only name, should be had of the common kinds of the locality. Teacher can take a piece of paste-board and fasten specimens, *labelled*, with which children can compare those they bring. Have one or two of these on the premises. Encourage collecting, and *do not throw specimens away before the children.*

The Weather.

An ideal May would be a month with sunshine and light rains so combined that the starting vegetation would make great progress. Cold days extending from about the 10th to 15th in some parts of the United States and Great Britain have been noticed. They are followed by high temperatures from the 17th to 22nd, according to Gen. Greeley. Observe, if occurring in your locality.

This is given also as a month when the greatest number of tornadoes have taken place. The time during the day is from 3.50 to 5 P. M., after the warmest part of the day, when the warm air ascending meets cooler air descending. What would be your summary as regards May weather?

A Bunch of May Flowers.

If in New England, we go a-Maying, the arbutus will be our favorite flower.

From moist and grassy spots, we see peeping out of their yellow eyes, in great number, the little flowers called bluets or Houstonia. Gathered roots and all, with moss, they will keep and grow in the schoolroom for a long time.

The early buttercups and the white strawberry blossom, are common everywhere, and we see the meadow-rue in our walks.

On low grounds we find the blue and the Canada violet, while the white loves a damp place, to open its little sweet-scented blooms. In some localities may be found the downy yellow, near the edges of the woods, and a very abundant variety is the birdfoot with its large, handsome blossoms of all shades of blue.

The composite family is represented by the dandelion, the true and false, robin's plantain or blue daisy, western daisy with violet purple rays, and the golden and other ragworts, common in swamps.

In rich and damp woods, the trillium—wake robin, painted and other varieties—will be seen.

The orchids are present in the showy orchis—the lady's slipper, pink and yellow—while the arethusa lifts its crimson head from the bog, as also the painted cup.

Near by, is, perchance, the marsh marigold, sometimes called cowslip, and from the ponds and lakes, the yellow water-lily, and the gold club, will be taken. Late in the month, or early next, the scarlet columbine will nod at you from the rocks on the hillside. Deeper in the woods we find the Solomon's Seal, the true and false, the bellwort and little rose-purple fringed polygala, all belonging to May.

More varieties of five finger spring up all around, and many new and old friends greet us each day in our walks.

Shrubs and Bushes.

The blossoms of these are very beautiful, whether the rhodora with its crimson flowers, appearing before leaves, (See Emerson's poem); or the kalmia or laurel, with its lovely pink sprays, the barberry with its sensitive yellow stamens, the red-berried elder, the purple and flame-colored azalea, the baneberry, the shad bush, or the many varieties of viburnum. In the south the beautiful rose acacia, the wistaria, and the early wild rose now appear, and make a bouquet in themselves.

Trees in Bloom.

The beautiful magnolia blossoms, the peculiar ones of the tulip tree, the common papaw with its lurid blooms, all in the south; the many different kinds of forest and shade trees, and the wild and orchard fruit trees all make May a synonym of freshness and bloom.

Bird Life.

The Baltimore oriole, or golden robin, the bank and barn swallows, many kinds of warblers, cat-birds, rose-breasted grosbecks, the whippoorwills, many thrushes, and yellow-breasted chats arrive this month.

The ruby-crowned and golden-crowned kinglets go north for the summer.

Toward the first of June in southern New England, we see and hear the bob-o-link. Also, the scarlet tanager, cuckoos, and among the last to arrive are the little humming-birds, who visit our flowers. Keep account of all seen.

In the early part of May the sudden change in temperature brings out great numbers of insects from their winter quarters to enjoy the sunshine and heat which they like.

The fragrance of the bursting buds and tender foliage, draw numerous bees and flies, and even the ground beneath our feet is teeming with insect life, and swarms of little beetles come out to try their wings.

The apple and cherry trees become infested with the tent caterpillars, who commence to devour the new leaves, if not disposed of at once.

In Massachusetts there are upwards of sixty different beetles who appear on the spring vegetation. One of the tree beetles, which is well known, is the dark brown May-beetle or dor-bug. It flies with a humming noise in the night, from the middle of May to the end of June, and often enters houses attracted by the light. They pass the greater part of the day on the under side of the leaves of the trees, fruit and some forest trees being selected. They are readily obtained in quantity, for examination; upwards of sixty being brought in one morning last May by an enterprising ten-year-old, collected near his home. We placed them in bottles to observe them.

Another more beautiful kind is the Goldsmith beetle, lemon yellow wing covers, and glistening like gold. Its habits are the same as the other. It is often called dor-bug incorrectly. Shaking pear trees will often dislodge them.

Butterfiies, Hawk-Moths and Moths.

Hawk-moth.

These become plenty before the middle of another month. They can be distinguished apart by the antennæ generally. In butterflies, these are thread-like, knobbed at ends; in hawk-moth, thickened in middle and often hooked at end; in moths, neither of these, but tapering from base to end, either naked or feathered.

Other distinctions, as of wing adjustment, and manner of using, are present, but we can generally tell them apart from the antennæ.

Common butterflies, as the white cabbage, and the yellow sulphur, or Colias, become plenty.

Hawk moths, and moths generally, fly at early twilight or night, and are attracted in cities by the electric lights. They can be obtained there; if one is around when the globes are cleaned next morning, quite a number of different varieties may be gathered.

By the first or middle of June, we find our largest silk spinning moths. These are the Cecropia, Prometheus, and Polyphemus. They are very beautiful. The Luna of the same division does not come out till July. Watch for these, they are worth adding to your collection.

Other forms of animal life will be noted next month.

A Language Lesson for the Little Folks.

By Lucy S. Ingram, Everett, Mass.

IT was three o'clock in the first grade room and forty pairs of eyes, blue, black, grey and brown, were fixed intently on Miss Raymond as she quickly arranged a gayly decorated tea-set on the number-table, which had been previously covered with a white cloth. No wonder the little people watched, for had they not seen on the blackboard all of the morning these magic words written in Charlie Brown's best Spencerian hand-writing:

"Miss Raymond invites all the members of the first grade to an afternoon party, from three until three-thirty o'clock."

They might well remember that invitation, for it had taken some of them a little time to read all the words and now the hour had arrived when the "party was to begin."

Tommy Little over in the corner looked with big, round, wondering eyes as he saw those beautiful dishes with the red roses scattered so profusely over them. But most he wondered at the bit of "white cloth," as he called it, that was beside each plate; for Tommy, be it known, came from a home where napkins were considered a superfluous luxury.

When all was ready Miss Raymond turned to the children:—

"Who can tell how many can come to my party at the same time? Charlie Brown, can you?"

"Yes'm, twelve can."

"How do you know that?"

"Because you have twelve little bits of crackers. I can see 'em," answered Charlie, promptly.

"Yes, that is so, but is there anyone who can give another reason; Cora, can you?"

"Yes, you have twelve plates and twelve cups," said Cora.

"Ah, I like that answer. But let us talk about this that I have in my hand," (holding up the napkin.)

This attracted Tommy Little's attention again, "That's a piece of cloth, that's all," he remarked.

"So it is, Tommy, but do you know what we call it?"

Tommy didn't know, but Edith Brown answered, "A napkin."

"Now I wonder who can tell what the napkin is made of?"

"Cotton," "cloth," came in quick reply from the children. At last Edith Church gave the name "linen."

"Who knows where we get our linen?" Charlie Brown, practical always, replied promptly, "We buy it at the store."

"But where do the men at the store get it?" This was a little hard. After a while Johnny Bolton, whose father was a manufacturer, suggested "a mill."

"Yes, and let us go into one of these big mills. At first we are almost deafened by the noise and I imagine Edith and Lulu and some others would cling fast hold of my hand, the big wheels look so large and cruel." Here Charlie Brown and Tommy sat up very straight as if to say they wouldn't be afraid. No indeed! "Soon we get used to it and following our guide we go into a large room where in great boxes or bins we see something yellowish-brown in color which they tell us is flax. Do you know where flax comes from? No? Out in the warm sunny fields it grows and because the little flax plant needs more light and heat than our corn it grows where the days are longer and sunnier than ours. We go from room to room in the mill; watch the big wheels do their work so well that we no longer feel afraid of them; see the flax cleaned, pulled out into threads; watch the threads woven in and out, in and out by the same kind wheels until at last we have a fine piece of linen out of which we make our napkins, and what else, I wonder?"

"Tablecloths," "handkerchiefs," "white dresses," came the eager answers.

"Now I want ever so many stories about this," said Miss Raymond, taking up the tea-pot, and little Mary very proudly told that the tea-pot had a nose, a cover, a handle, and that we put tea in it.

"Have we tea in ours?" "No we have milk, I looked to see," piped up irrepressible Tommy.

"Sure enough! Do you know what we make from milk?" "Butter! Cheese! I saw 'em do it in the country once." said Tommy.

"Now supposing we did not wish to *drink* the milk in our cups what could we do?"

"I know," said golden-haired Alice Lovejoy, "My mamma told me. We use a big spoon."

"Well, Alice, you shall show us how you eat your crackers and milk."

So the little girl came forward and daintily putting the napkin, tiny as it was, in her lap, ate with the spoon the cracker and milk Miss Raymond gave her.

"Do you see, Alice has shown us what napkins are for and did you notice she put the side of the spoon to her mouth and that was ever so nice. It looks so funny to see a little person when he has a "really true" big spoon try to crowd it into a little mouth."

Tommy was so filled with admiration at this, that he begged to be allowed to try. To be sure, he dropped his napkin and spilled the milk, but he succeeded in putting the side of the spoon to his mouth and went back to his seat satisfied.

"But look at the clock, do you know what it says?"

"I do. I can tell time. It says half-past three," said the practical Charlie.

Yes, it surely does. So I am going to ask twelve of these little people who have been sitting so quietly to come and have some of the "bits of crackers" and next time others shall come.

Questions in Number.

Third Grade.

Tell the different pieces of money you can use to give me six cents. Tell *all* the ways.

Measure the cover of your speller and tell how many square inches in one side of the cover. In both sides.

There are nine boys standing in a row. What do you call the middle boy?

A goose weigh ten pounds and half its own weight. What does it weigh?

I had half a dollar and spent one-fifth of it. How much money had I left?

This piece of ribbon is two and a half feet long. How many inches long is it?

Draw a pie on your slates—divide it into fourths. Take out one fourth. How much of the pie is left?

I have twenty-seven apples and will give you five-ninths of them. How many apples shall I have left?

John had thirty cents, and James had twenty-four cents. James spent one-third of his money, and John spent one-half of his. Which boy had the more money left and how much?

How many shoes does it take for an ox, a horse, and a boy?

How many faces have ten cubes?

How many times do you come to school in a month?

How many yards long is the blackboard on the south-east side of the school-room?

If you save five cents a week for ten weeks, what part of a dollar will you have?

How long is the new Columbus postage stamp?

Two men are cutting down trees in a forest. A cuts down five trees in a day, and B cuts down four trees in a day. How long will it take them, working together, to cut down forty-five trees? At fifty cents a tree how much ought each man to receive for his labor?

A man dug twelve holes for planting trees, each hole three feet deep. At twenty-five cents a foot for digging, how much ought he to receive for his labor?

John's father told him he might have a "crow's nest" in the big maple tree if he would attend to the building of it. It required the service of a carpenter four days at two and a half dollars a day; fifty feet of lumber at three cents a foot; three joists each eight feet long at two cents a foot, and four pounds of nails at five cents a pound. Cost of the "crow's nest"? Make out the bill.

George was allowed to study his arithmetic lesson in the "crow's nest" forty minutes every week day for six weeks. How many days of twelve hours did he spend in the "crow's nest"?

Eliza counted sixty caterpillars on the leaves of a walnut tree, and Dora counted two-fifths as many. What was the difference between the two numbers?

Bertie and Edith and Jessie gathered violets along the banks of a meadow brook. Bertie picked eighty-four; Edith one-half as many as Bertie, and Jessie five-sixths as many as Edith. How many violets had each?

Willie brought the teacher as many pinks as there are states in the Union, and Arthur brought as many roses as there are Western states. How many flowers did they bring?

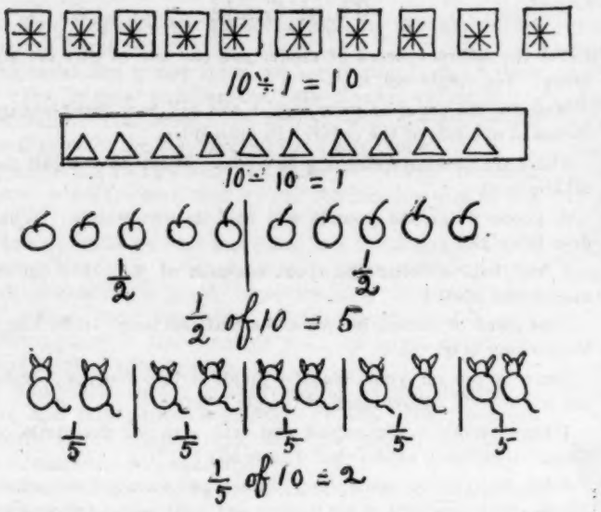
All the girls of a school and thirteen of the boys went to the woods to gather wild flowers. If one-third of the party was boys how many pupils went to the woods?

From Jersey City.

(Specimens of work in Primary Schools.)

The work from the Jersey City Schools that is given herewith is culled from papers that were shown at the time of the local exhibit during the month of December 1892. In making the selection of work for your paper, I feel that I have not done some of the schools justice. But it was impossible to secure the originals, as they were already bound, and tired teachers were slow to respond to requisitions for repetition.

PRINCIPAL SCHOOL No. 7.



BRUNO BECKE, (2d half 1st year.)

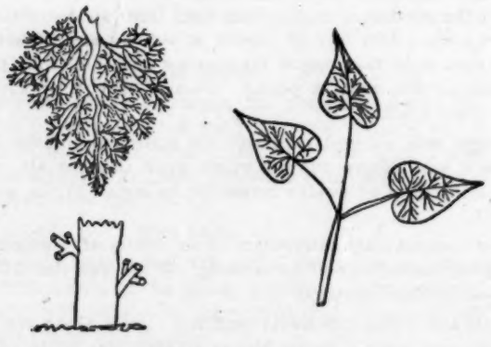
Observation.

The pupils have examined the different parts of the plants. They have described and made statements of them. The exercise reproduced below is produced from memory.

ETTA S. SCHODER, Teacher.

Plants.

(From memory.)



Root, stem, and leaves.

The root is that part of the plant which grows downward and takes in food in a liquid form.

The stem is that part which grows upward and holds the branches and leaves.

The leaves are the lungs of the plant and make a foliage.

GEORGE PEERE, (2d year grade.)

Picture Stories.

Pupils of the class all supplied with pictures. No two of the pictures alike. All build stories from the pictures supplied.

ELIZABETH M. GERLACH, Teacher.

Vacation.

field.	sailed.
asked.	stick.

Lillie came to the field with a book in her hand, and sat down under the tree to read.

Willie came to Lillie and asked her to come to the pond and see him sail his ship.

The ship sailed far away. Willie got a long stick with a hook on the end of it and drew the ship back to the bank.

LIZETTE STORK, (1st half 3d year.)

Observation.

The children have been taught to notice the difference in the size of things. They have given the result of their observation in sentences.

C. A. TOWNSEND, Teacher.

1 d 2 d 3 d

Number 1 is a large d.

Number 2 is a larger d.

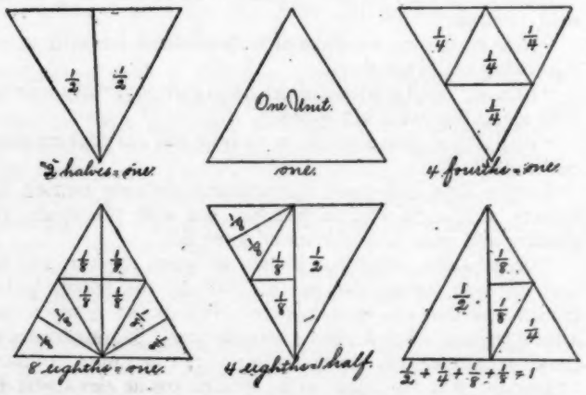
Number 3 is the largest d.

JOSIE CHANDLESS, (1st half 1st year.)

Number.

The teaching of halves, fourths, and eighths, and their relations to one another. This pupil was allowed to trace the units upon the paper, but the divisions were made from measurements taken by herself.

SARA SICKELS, Teacher.



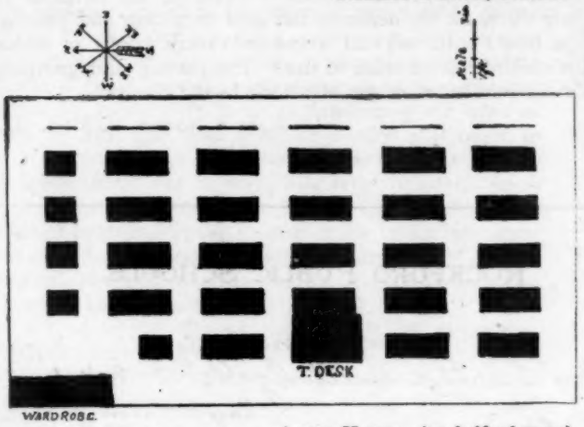
MAY KIMBALL, (3d year.)

From Jersey City (continued.)

Geography.

In teaching geography we talk about the objects in our schoolroom, their direction and distance from each other, and their measurements, developing a scale and drawing the plan. Any child who can draw accurately the plan of the room has laid a good foundation for future study in geography.

CHARLOTTE POND, Teacher.



ANNIE HARDE, (1st half 3d year.)

A Spelling Lesson.

By E. M. REED, Principal Training School, Springfield, Mass.

"COME, Elsie, bring your spelling book and show me how well you can spell," said grandma, who had come for a visit, and knew that her little seven-year-old granddaughter was nearly ready for the third grade in a large city school.

"Why grandma, I have not any spelling book. Mamma says she used to have one when she went to school, but we do not have spelling in school now;" said Elsie with an unconscious air of having escaped the thraldom of mamma's school days.

"My dear!" exclaimed grandma in her soft, slow way, adjusting her glasses as though the room had somehow grown dimmer. But recovering herself she drew her astonished gaze from wondering Elsie and said sweetly, "Oh, never mind the book, sit by me here and you can recite your spelling lesson without it. Spell book." "There is an 'o' in it, isn't there grandma? 'k,' no, 'b-o-k'" hesitatingly. "B double-o-k" said grandma, reprovingly. "Spell table." "T-e-b-a-l." "T-a-b-l-e" repeated grandma, slowly. "Spell it after me. Now spell chair, try hard, that's a good girl." "C-h-e-r-e" came very seriously from the little scholar.

Grandma's tactics changed, her good opinion of Elsie's scholarship rapidly vanishing. "What does p-i-c-t-u-r-e spell?" "How does it look, grandma? Please write it in my book." Grandma wrote. "Why that is *picture*" said the child, brightening as the familiar word met her eye, "only you do not slant all your lines the same way when you write, grandma, and the 'p' has a loop in it." Elsie had turned critic with the most innocent intentions, unconsciously expressing what she was quick to perceive. "That will do now, child," said grandma, wisely deciding to let the examination pass for the present. But when occassion presented she said mildly but seriously to her daughter,

"Surely you are not satisfied with Elsie's teaching when she can hardly spell a word after being at school two years."

"It does seem strange," said the daughter, "when I remember that at Elsie's age I stood up every day and spelled out loud a long column of words that I never heard of nor saw outside of my spelling book. But she reads so much, understands her arithmetic so well, and talks so intelligently of everything she sees out of doors, that I have hoped she would learn to spell in time." "But no spelling book," pursued the old lady, "how can she learn to spell?"

The answer involved an unfamiliar line of logic, so the younger woman chose to defer the discussion and said, "Elsie will write you a letter this afternoon to amuse herself and perhaps you can help her to learn to spell."

This is Elsie's letter with no aid in spelling or construction of sentences. The errors stand as she left them.

Springfield, Mass. April 6, 1893.

My dear grandma,

We are having vacation to-day so I am going to write you a little letter. Mamma says to tell you what we do at school. Why, we read, we sing and do our number work. Then we write. Sometimes we write with ink in our books. We write number stories, and our reading stories and lots of other things that we talk about. Sometimes we write letters.

Yesterday I went into Miss Reed's room to write a letter. Ruth Miner, my little school-friend went with me. I sat at the table. Ruth sat at the desk. I wrote to my aunt Fanny and Ruth wrote to her aunt Ella. A boy came into the room because he was naughty. His brother is in our room and had to be sent home because his hands were so dirtie. We were n't going to tell anyone where we had been but have it for our secret but now of course that boy will tell.

We are all trying too find some things that makes us think spring has come. I have seen some buds swelling, and a robin, and some green grass. Some girls have seen bluebirds and blackbirds.

Now I must say goodby,

Your loving Elsie.

Grandma was astonished and evidently greatly relieved. She expected print letters, but Elsie wrote a neat and easy hand very legible for spectacled eyes. "Why, why! How did you know how to spell the words?"

"Oh grandma, I didn't have to *spell*. I just *wrote* them right off fast as anything. You don't have to spell when you write, only when you don't know how a word looks."

To us of a past generation who entered with such eagerness into the exciting spelling matches and who knew the time-honored art as a purely oral process the change from the spelling book to the copying sheet as a means of learning to spell, appears inexplicable.

The difference lies in the kinds of associations made in learning to spell. In the old days of oral spelling the first act was the association between the sound of the word and the names of the letters composing it, in their order.

Written spelling followed in time and then a translation was made from the sound of the word and the names of the letters in their order to the form of the word.

In beginning with oral spelling the mental processes may be enumerated thus: 1. Thinking the word. 2. Thinking the sound of the word. 3. Thinking the names of the letters in their order. 4. Thinking the form of the word.

In Elsie's case, association was made directly between the thought of the word and its form, with no intermediate process of thinking the sound or the letters. My meaning may be illustrated by the following diagrams.

Diagram A.

Diagram B.

Diagram A shows the necessary acts in learning to spell.

1. Eye. 2. Sight centre for words. 3. Motor centre. 4. Muscle movement used in writing the word.

Diagram B shows the processes when oral spelling is made the basis.

1. Ear. 2. Sound centre for words. 3. Sound centre for the order of letters. 4. Sight centre for the order of letters. 5. Motor centre. 6. Muscle movement used in writing words.

Other associations are made in spelling than these indicated, when the art has been learned. These, as I view the subject, are the ones made in acquiring the art by a normal child. In cases of defective senses different associations are made in learning to spell.

The initial process is copying the words which stand plainly written before the eye.

Later the visual word is no longer necessary and association is made between the thought of the word and the form-

concept which has taken the place of the visual form. When the concept is blurred as in the case of *girl* above, where the child placed the *r* before the *i*, then the spelling is inaccurate. When the concept is incomplete, then letters are omitted. When the concept of the form is definite and strong, a word can never be misspelled.

With practice a close association is established between the form of a word and the muscle-movement necessary to produce it in writing, so that in the case of writing one's own name, it writes itself as we say. We are conscious of following no image in moving the hand. It must needs move with perfect order since it has so many times gone over the same act. With hundreds of other familiar words the same is true.

No doubt a time existed in learning to spell when the mind was conscious of the form which the hand slowly and laboriously followed in spelling the words. We experience it in adult life when writing in a foreign language. The form of the word is clearly before the mind but the hand has not moved often enough over the form in connection with the thought of the word to reproduce it with ease. The art of spelling is in the hand and brain, not in the voice and brain. Like other arts it is only acquired with incessant practice, and acquired slowly. Unlike other arts it has no separate place in the school curriculum but is learned most thoroughly and most easily in connection with all other studies.

Let the practice be in sentences, not with single words. Careless work will never result in good spelling. Concentration of mind is as much demanded in studying the forms of the words as in learning facts in arithmetic. Teachers sometimes say that their pupils do not learn to spell through writing. I look at the slate work and find single words written, perhaps ten times each. The first two copies are correct, then a *v*, is substituted for a *w*, an *e* for an *a*, an *l* for an *h*, in various words. I ask the child, What is this you have written? With an upward movement of the thumb and shooting glance at the board he says, "Teacher told us to copy it." But what is it? I persist. "I have forgotten." This is a ludicrous parody upon the mental process of learning to spell.

One is much tempted to speak of the remedy for poor spelling but my paper deals with a right beginning, not with corrections, so it must suffice to say that all corrections need to follow the original line of thought. The poor speller is the ignorant speller. He must begin at the beginning and advance like the smallest pupil. Develop keenness in form-perception; establish so close an association between the form concept and the muscle movement necessary to write the word, that the act becomes practically automatic, it follows so quickly upon the thought of the word.

I feel a newer life in every gale;
The winds that fan the flowers
And with their welcome breathings fill the sail,
Tell of serener hours,
Of hours that glide unfelt away
Beneath the sky of May.

— *James G. Percival.*

Language Work.

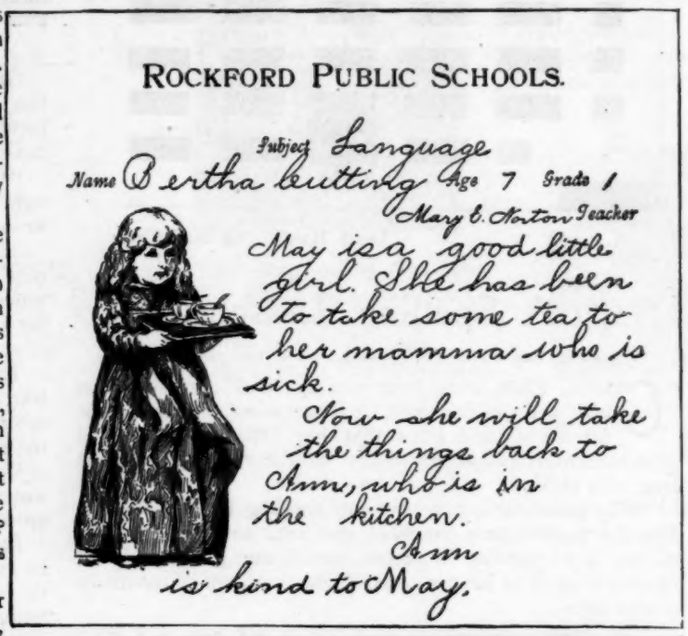
First Grade.

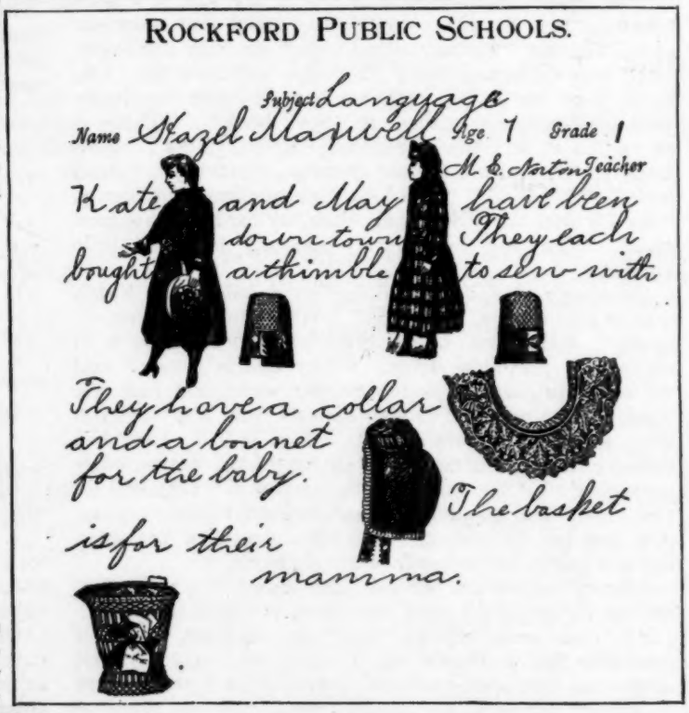
(Extract from private letter.)

I have a large number of Swedish and Norwegian children coming to me who have a very limited knowledge of English and I have been obliged to try many ways to get them to express themselves readily in it. I collected a great many pictures, selecting them with special reference for the purpose in mind, and placed them on a long table around which the children stood. I let them choose their pictures and say something about them. When they had learned to write words enough to make the simple sentences, they copied them on their slates and read them to me. Sometimes I wrote them on the board and let them read from it. This plan I steadily followed for five months and feel that the results obtained are such as to encourage me in the further use.

The children brought me catalogues of various kinds and we spent half an hour Friday afternoon cutting out pictures and putting them away for further use. I do not send these for excellence in composition or penmanship but for the good results obtained, for the intense interest of the children in their work, for the neatness and skill in cutting and pasting. The best I collected and bound into small books of which the children never seem to tire. The pasting and grouping for the number work was also done by the children.

MARY E. NORTON, Rockford, Ill.


ROCKFORD PUBLIC SCHOOLS.
Subject Language
Name Bertha Cutting Age 7 Grade 1
Mary E. Norton Teacher
May is a good little girl. She has been to take some tea to her mamma who is sick.
Now she will take the things back to Ann, who is in the kitchen.
Ann is kind to May.


ROCKFORD PUBLIC SCHOOLS.
Subject Language
Name Hazel Maxwell Age 7 Grade 1
M. E. Norton Teacher
Kate and May have been bought down town They each a thimble to sew with
They have a collar and a bonnet for the baby.
The basket is for their mamma.

"Cross words are like ugly weeds,
Pleasant words are like fair flowers;
Let us sow sweet thoughts for seeds,
In these garden-hearts of ours."

Arithmetic.

II.

How to Select the "Facts" to be Taught.

By Thos. M. Balliet, Ph.D., Springfield, Mass.

To repeat a statement made in the previous article, *A muscular movement, or combination of such movements, which occurs very frequently in actual life should be practiced until it becomes automatic.* This applies to penmanship, spelling (which is a function of the muscles of the hand), and to all other muscular movements, such as sewing, knitting, etc. In like manner: *A thought process which enters into a great many thought processes of our everyday intellectual life, ought to be made so familiar to the mind as to require as little conscious effort as possible.* It ought to be made automatic. *A muscular movement, or a thought process which needs not be performed very frequently, needs not be performed automatically.* Hence, to speak of these two kinds of processes in the reverse order, there are some processes which need only be taught or "developed", whilst there are others which must be taught and then be repeated until they can be automatically performed.

Now let us apply this to the "facts" in arithmetic. Some "facts" occur every day in arithmetical thinking and must be memorized by means of thorough drill; others which occur less frequently need only to be "developed." In addition, for example we ought to be able to read two figures at a time as one; $6+4$, $8+5$, etc., ought to be promptly thought and read as 10 and 13. Combinations like $7+5+3$, $1+3+2+5$, need not be so read. It would be a waste of time to drill upon such combinations as the latter until the pupil could think and read them as one number, but they must be taught. Hence, in addition, the facts to be *drilled upon* are: all combinations of two numbers, neither of which exceeds 10, which make the given number. Strictly speaking, therefore, the teaching of facts in addition ends with the teaching of the number 20. All addition in numbers above 20 is simply a repetition of the processes taught with the numbers below 20, coupled with a knowledge of the laws of the decimal notation. In regard to subtraction, the facts to be drilled upon until memorized are: all subtractions involving a subtrahend and remainder neither of which exceeds 10, like $9-6$, $12-3$, $19-9$, etc. Successive subtractions, like $8-3-2$, $15-8-2$, etc., ought to be taught, but not memorized. Hence, like addition, and for a similar reason, the teaching of subtraction, except in so far as it involves a knowledge of the decimal notation — the mere language of numbers — ends with the teaching of the numbers up to 20.

Multiplication deals with the equal numbers which make a number. The facts which occur frequently in our thinking and must be "memorized" are: the products of all couplets of integral numbers neither of which exceeds 10. Hence, there is no more teaching of multiplication after the numbers up to 100 have been taught — except in so far as it involves a knowledge of the Arabic rotation.

There are two additional classes of facts to be taught, but not to be memorized. These are: products of fractional numbers $\frac{3}{4} \times 5$, $4\frac{1}{2} \times 3\frac{1}{4}$, etc., and successive multiplications, like $2 \times 2 \times 3$, etc.

Division, in its double form, deals with the equal numbers in a number, as $8 \div 2$; and the equal parts of a number, as $\frac{1}{2}$ of 8.

The facts to be taught and memorized are the combinations consisting of integral numbers, like those stated above. The facts to be taught but not memorized are those involving fractional numbers.

Here again the limit is reached in $100 \div 10$ and $\frac{1}{10}$ of 100. Beyond that, the teaching of division is simply a part of the work of teaching the Arabic notation — the technical language of numbers.

To sum up: All the combinations in addition and subtraction which are to be memorized, have been taught when the number 20 has been taught. Up to this number the four processes of addition, subtraction, multiplication, and division are therefore taught together. Above the number 20, the only facts to be memorized are those involving multiplication and division. Hence it is not quite accurate to say that the Grube Method requires that the four processes be taught together in each number. That is true only up to the number 20; beyond that, only the two processes of multiplication and division are taught.

According to the foregoing principles, odd numbers like 31, 17, 29, below 20, involve no facts in either multiplication or division. Above 20, such numbers as 23, 26, 29; 31, 34, 37, 38, 39, etc., contain no facts whatever to be memorized, as the processes of multiplication and division would involve fractional, instead of integral, numbers or parts. Hence the numbers above 20, involving facts to be memorized are: 21, 22, 24, 25, 27, 28; 30, 32, 33, 35, 36: 40, 42, 44, 45, 48, 49; 50, 54, 55, 56; 60, 62, 63, 64, 66; 70, 72, 77; 80, 81, 88; 90, 99; 100.

In short, the numbers involving facts to be memorized are those, which could be found in a multiplication table up to "10×10," or in an old-fashioned "division table" up to $100 \div 10$. In the foregoing list, numbers like 33, 44, 55, etc., involving 11 as a factor, may profitably be omitted in strict accordance with the foregoing principles, or they may be retained as a harmless concession to conservatism.

It is seen from the above that the numbers requiring to be taught become gradually fewer from 20 to 100. The same, upon analysis of separate numbers, would be found true of the number of facts to be taught in the higher numbers as compared with those in the lower. Of the thirty-five numbers in the list given above, it is seen that 17 occur between 20 and 50, and only 18 between 50 and 100. If it is borne in mind also that up to 20 the four processes are taught together, and from 20 to 100 only multiplication and division, it is clear why it naturally ought to require more time to teach the former than the latter. Usually, in good schools, the numbers up to about 10 are taught the first year, those from 10 to 20 the second, and those from 20 to 100 the third.

I have spoken of "memorizing" facts — sums, remainders, products and quotients. These must be memorized, after they are comprehended, by means of *repetition.* Three different things may be repeated: 1, the concrete thought process; 2, the process of oral expression of the facts; 3, the process of visual expression by means of figures. The pupil may either repeat, : : :: :::, the words "three times two are six," or the figures $2 \times 3 = 6$. Each mode of repetition, is necessary, but it is to be observed that the first fixes in the memory the *thought process,* whilst the other two impress only the language of this thought process.

It is important that the concrete thought process be repeated (by having the pupil solve many applied problems objectively) in order that it be made thoroughly familiar to the mind. For it is familiarity with the thought process which determines the pupil's power of reasoning afterwards in the advanced work in arithmetic, and not his ability merely to repeat it in words or in figures. This drill upon the concrete thought process involves a use of objects which is almost universally overlooked by persons who theorize on this subject without doing any teaching themselves. We can, in fact, distinguish four stages in the teaching of every number process: 1. The development of the process objectively, leading the pupil to comprehend it. 2. Drill upon the concrete thought process. 3. Drill upon the oral expression of it. 4. Drill upon the expression of it in figures. The memorizing of a multiplication table generally involves the omission of the first, and always the omission of the second.

Teachers make careful preparation for teaching all other branches but they conduct reading classes while utterly ignorant of the very elements of the art. They plan special methods for daily work in other studies and leave reading to the hap-hazard chance of the brief period allotted to it. The same teacher whose mind is alert when conducting a class in mathematics, takes the reading-period for complete mental relaxation.

—*Anna Diehl.*

Botany for Little Folks.

By S. Lilian Blaisdell, Minneapolis, Minn.

More Babies.

LAST month we found ever so many of Mother Nature's babies, in the cradles she swung in the trees. Do all her babies live in the trees? What little friends are you expecting soon to see on your lawn, in your garden, and in the woods? Where have they been sleeping all winter? Yes, in the great brown earth bed,— how snug and warm they must have been, covered over by the thick leaf and snow blankets. Would you like to see how they look asleep? Here is the top of the ground (making sketch as below)

Sleeping in the great brown earth bed.

and here just beneath is a plump little baby cuddled up snug and safe in her white night-dress (bean); near by is another darling robed in yellow (pea); next come little twin sisters (sugar maple),— see how lovingly their heads come together, and what long flowing gowns they wear— surely *their* toes are never cold. Then cuddled so close together everywhere, are hundreds more, some so tiny we can hardly see them (grass, dandelion, etc.). What a crowded bed! Ha, ha, and who is this not half covered up? A little fellow who has actually gone to sleep with his coat and cap on! (acorn). Would you believe it? 'Tis true, for I found him this very morning under an oak tree, and carefully lifted him out of bed on purpose to show you. (Presenting an acorn) Paul, come take his little cap off. What does he make us think of now? What see at either end? What color is the coat? How feel? Wouldn't it be nice to see him wake up? But he is not quite ready. (Miss Andrew's story of Alba may appropriately be told here.)

What baby did we find sleeping in a white night-dress? Ever see one like it before? "Mamma has a bag full?" What for? Where get them? Where did the grocer get them? And the farmer? But how happened they to be in his garden? "He planted them"— planted *what?* Did you ever watch the beans coming up? 'Tis a pretty sight. Suppose we have a garden like the farmer's, only smaller, here in our schoolroom, a

Window Garden.

How shall we make it? Each child should be encouraged to contribute something. First, is needed a starch or salt box filled with earth. What does the farmer do before he plants his beans? Sing, "Would you see how does the farmer, etc., Plough his field in the spring?" "Look, 'tis so, so, etc." Let children take turns making a straight furrow, using the small triangular prism from the model case. The harrowing may be done with a toy rake or old comb. We will have a flower bed at one end of the garden,— what shape shall it be? Let the children design forms with pegs or sticks, one of which may be reproduced in the garden box.

"Is it necessary to spend time on these preliminaries?" I hear someone ask. It is highly important. What child, thus experiencing the pleasure of preparing a garden and finding the means so easily within his power, will not yearn to repeat the experience at home? Fortunate the child who is inspired to have a garden all his own, for in the care and forethought of preparation, and the tending and nurturing of tender plant life, is exercised many a self-denial, many a loving and unselfish thought and deed; and moreover, what the child pleasurably works and cares for, he learns the more to love. An excellent plan for fostering this inclination to have a home garden, is to let each child model with clay a little flower pot for his very own, fill with earth, plant a bean or two in it, and take home to watch and nurture as he will. I assure you, "My bean" will be the favorite theme of conversation for many days.

Does the farmer plant anything besides beans? Encourage the children to bring peas, squash seeds, corn, oats, etc.; also, morning glory, nasturtium, etc., for the flower bed. Plant the seeds about a quarter inch deep. I wonder what the babies will do when they first wake up? That every step in germination be readily noted, some of the seeds should be placed on thin layers of cotton batting and floated on water in glass tumblers. In a few days a score or more of little white points will be seen on the underside of the batting. Where could they have come from? With this event is introduced the first lesson in

Germination.

Place on the slate before each child a dry, hard bean, also a bean which has been soaked in warm water for a few hours, and one of the freshly germinated beans from the tumblers. Lead the children to observe, first, the characteristics of the unsoaked bean; its color, shape, position of eye, and its hardness. (This may have constituted an exercise by itself with the very youngest children.) How does the next bean (the soaked one) look and feel beside the first? Why so? Look at the third bean. Anything new? Yes, the skin is coming off and I see a queer little white point. How came it there? Is there one on the second bean? Let us look at it (the 2nd) carefully, remove skin. Sure enough, what a fine hiding place. Compare radicles of the two beans. It makes me think of one of Alba's little arms, (Miss Andrew's story). I wonder what the radicle was trying to get. Observe beans in the tumbler. But how did they know which way to reach for the water? Test this instinct by turning some of the beans over, leaving the radicles to point skyward and watch developments.

Continue investigations with the second and third beans. Observe number and size of cotyledons (purpose of which to be learned later), and discover the plumule between. As each day brings new developments, compare with previous stages. Which way does the plumule always grow? Test as with radicle; also, get large well-sprouted turnip or carrot, cut off part of root end, scoop a hole for holding water and hang by cord like a hanging basket. Leaf-sprouts will be pointing downward — will they continue to grow so?

The characteristic differences between the growth of plumule and radicle should be noted: the direction, branching, symmetry, color, joints, buds, and function. Encourage every child to express his observations in drawing.

Observe how the young plants in the window lean in one direction. Which direction? Why? Turn plants and watch proceedings. Grow some in the dark. What results? Why are sprouts seen on vegetables in the cellar so pale? Who knows why celery stalks are white?

Gray's "How Plants Grow," and Miss Youman's "First Book in Botany," are excellent helps in this work. Miss Poulsson's song, "The Little Plant," (in "Finger Plays"), and "The song of the Rain" among other spring songs in Miss Jenk's book (Ditson & Co.), are pretty to learn.

An Observation Bulletin.

Perhaps our window garden is not the only garden of interest in the neighborhood. Who knows of another? Who knows where something is growing? Tell us the news. Wouldn't it be fun to be like reporters for the newspaper and write about the nice things you see everywhere and anywhere? Bring your notes to school and we'll fasten them to this banner on the wall where every passer-by can read them and know what is going on. 'Twill be like the bulletin that stands outside a newspaper building. It takes but little encouragement to create a most delightful enthusiasm in this reporting scheme; the powers of observation and investigation will gain double the development. Who knows what happened in Morning Glory Town last night? Anything new on Bean St.? In Cornhill? In Brookville (bank of stream)? In the Vacant Lot? etc.

How pleased the children are when the next room teacher occasionally steps in to "read the news" and "look over the illustrations." The language exercises may often consist in writing "reports" of the morning's lesson. What an extensive cyclopedia of plant knowledge these reports will make by the close of school! We hope many of them will be saved in booklet form for future reference and inspiration.

The Voices of the Trees.*

By Dr. Albert E. Maltby, Slippery Rock, Pa.

What the Young Oak Said.

CHILDREN, have you ever heard the voices among the forest trees? Did you ever hear the trees whispering to themselves, or sighing or sobbing, oh, so sorrowfully? Have you not heard them singing or chanting, now soft and low in sweetest melody, now loud and clear in grand, triumphant chorus? And then, how the great old oaks speak to us of strength and power as they spread wide their kindly arms, making shade for weary children. Yes, and the laughing, happy maples, brightest and most cheerful of trees; as the sunshine plays among their leaves, the whole summer seems to lie hidden there.

"Once I rode through the dark wood, and the trees seemed to weep and moan as the wind swept through them," says Lettie. "At home we have two old oaks which bend toward each other and seem to be speaking in loving tones; we call them the 'Affectionate Oaks,'" says Mary.

"But, Miss Christley, I never heard the trees say anything," says Tom. What did the pussy-willows tell you? Did they not tell you that spring had come? "I did not think of that." And then the tall and slender iron-wood and maple saplings seem to laugh and say, "The brooks are open, come a-fishing, Tom."

To-day we brought some beautiful young oaks and maples from the woods and set them out upon the lawn. "They will be great trees some day." "Two kinds of maples in the woods." "Hard and soft." "Different leaves." "White oaks, red oaks, pink oaks, and black oaks." Can we make the young trees tell their story? Let us go out into the woods to-day and see. The snows have melted away, and warm rains have come. Here we are under this great oak, which is such a big, kind-hearted tree that we feel something of trust coming into our hearts as we look at the grand tree's gnarled branches.

"A goodly tree it is;
Towering to the skies,
The fury of the wind defies.
From age to age in virtue strong,
Inured to stand and suffer wrong."

Take that stick and push aside some of the dead leaves. Pick up some of the acorns,—the cradles in which the baby oaks lie sleeping. "Did you say sleeping?" This one is awaking; for here the cradle shell is softened, and the germ has swollen and burst through to send the young oak's baby foot, the *radicle*, down into the soft, black earth. "See the cradle's delicate pink lining." (Fig. 1) But look at the one that Johnny brings us. (Fig. 2.) Here the delicate pinkish-green head shoots upward to the light. This head is called the plumule. "Looks like a plume." "How fast it grows!" "What does the baby oak eat?" He lives upon *starch*. "Stored up for him in his cradle."

Fig. 1.

Break open the brown cradle shell and see the two thick loaves of bread. "White, with a tinge of green." The young oak is nourished by this food while the little radicle enters into the black soil and puts forth little branches and fibers all covered with fine white hairs. Through these branches the young oak drinks up water from the soil. "Bread and water." "Starch." We shall prove the starch to be in the acorn when we go back to the class-room. So the young oak is nourished by the starch food of the two loaves. Some call these *cotyledons*.

Fig. 2.

After a few days the young oak shows a well-grown root and stem, and sends out broad pink-green leaves. Mary has found one of the large oak-babies. How beautiful it is! See, there is no more food in the shrivelled acorn, (Fig. 3) and so the young oakling must draw all of his food from the earth and the air. This he has learned to do, and the now useless cradle falls away. What a grand little sapling it is! Don't you think it will become a great red oak tree some day and have many a beautiful leaf? *Do you hear what the oakling says to you?* "Learn to depend upon your own efforts." "Self-reliance." "Growing upward."

Fig. 3.

Back from our forest visit, now, in the quiet class-room. "Oak for the solid floors, oak in desk and table." "Panels in doors." "The seats and chairs of oak sometimes." "Furniture for houses." Useful, valuable wood. "Bark for tanning leather." Live oak for ships. "Corks from the bark of Spanish oaks." Gallnuts are obtained from oaks, and are used in making inks and medicine. These are not fruits like acorns, but swellings caused by insects that puncture the bark of the oak twigs and lay their eggs in the wounds. The so-called oak-apples found on the leaves of our red oaks are gallnuts, but are not valuable like those found in Western Asia, because they do not contain so much *tannin* or ink-producing acid.

Shall we find the starch in the acorn? Let me put these grains of starch into this tube (A) with some water, and

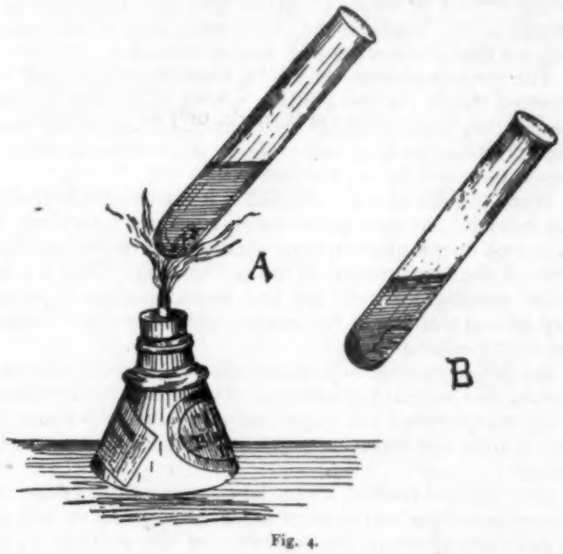


Fig. 4.

Charlie may hold it over the lamp until the water boils. Here is another tube with water, and I shall put into it these pieces of oak-bread from the acorns. Mary may boil this (B) over the lamp. Now I take these two little crystals (potassium iodide) and drop one into each tube. Hold the tubes over the lamp again until the water boils. The crystals are now dissolved. Into the starch liquid I put three drops of this acid (hydrochloric) and see! "The liquid is blue." Chemists say that the starch has been colored blue. Mary may take this little dropping glass and put three drops of the acid into the other tube which has the pieces of acorn in it. "Look!" "It is blue like the other." "There *is* starch in acorns." A wise man has said, "Read Nature in the language of experiment."

*Copyrighted.

Expressive Reading.

By Ellen M. Cyr, Cambridge, Mass.

WE have certainly much for which to be grateful that the little child is so good a preparation for expressive reading. We are not forced to teach him what tones and inflections accompany his various emotions. By the time he reaches the age of five, he is an adept in the art of expression.

The expression is there and we have but to capture it, and so skillfully fasten it to the words of the book that it may flit freely along the lines of the thought which the text book may prescribe. The first lesson in the schoolroom should be largely to call forth language and expression.

Gather the little ones about you, leading them to converse naturally about some picture, toy or drawing, being careful to keep closely to the subject, and insisting upon complete statements. Then introduce the written or printed word.

After several words have been learned, so that they are recognized by the children, use verbs in connection with them, letting the class act them and also having them impersonate the different animals which you may have chosen as the subjects of your first lessons. I speak of this, as action is one form of expression. As soon as possible write questions and answers upon the board.

These lessons help the children to throw themselves into the spirit of reading. There must be some emphatic word in every question and children are surely accustomed to asking them, from their earliest periods of conversation.

I will pass to an illustrative lesson in the reading book. First carefully look at the lesson and illustration to discover its possibilities. A few minutes talk will serve to start the imaginations of the little ones, and time will be actually gained by the concentration of their mines to the subject. A suggestion or question with regard to the illustration, a short introductory story giving a sitting or location. Anything; everything: which will animate the simple text which we are oblige to use. When the interest has been awakened the new words should be developed, placed upon the board, and practiced by means of various devices. This learning to recognize the words is the mechanical part of the lesson, and the final success depends largely upon it.

The pronounciation should be carefully noted, and the children should use the words in sentences so that we may be sure they are thoroughly understood. Then should come the practice reading, either from the board or slips of paper, prepared by the teacher.

When you are sure the vocabulary is mastered, take the lesson in book. As soon as the class is advanced sufficiently, let them look over the lesson, silently gathering the main facts and drifts of the text previous to the oral reading. This is a valuable training for both eye and brain, and an important step toward learning of the lessons, which must be committed in the coming years.

Begin this training with questions, which follow the text closely, and suggest the answers. During successive lessons make the questions less suggestive until you finally reach the end in view, the gathering of the substance of the lesson with the eye

Let your oral reading lesson be conversational, taking the form of questions and answers being very careful in this not to make the questions too suggestive of the wording of the text. I have heard teachers question the children, in calling upon them to read, in such a way as to put the very words into their lips. Take for example the sentence "I have a pretty white dove." Such a teacher will say, "Who has a pretty white dove?" and the child will answer, "I have a pretty white dove. Very soon the children, at times so dense in grasping what you wish to teach them, and again, almost super-human in divining your secret thoughts and weaknesses. will find your words and manner an easier cue to the printed page than the characters which lie upon it, and some day you will awaken to the disheartening truth that what you thought was intelligent reading was simply the echo of your own words.

I will take for an illustrative lesson, the following, which is a very simple one.

I have a pretty white dove.
Do you wish to see my dove?
Yes, I do wish to see it.
Look up into the tree.
It is a pretty dove.
Fly to me pretty dove.

One day a little girl came to see Grace. She lived in the city and her name was Ethel. Grace wished Ethel to see the farm, so they went out for a walk.

Now Anna may tell what Grace said as they drew near the barn. (Give time for silent reading and insist upon it.) "I have a pretty white dove."

What did she than ask Ethel?

"Do you wish to see it?"

Ethel thought that doves were beautiful and she said

"Yes, I would like to see it." Grace looked about for her dove, and saw it in the trees, watching her with its pretty pink eyes, so she turned to Ethel and said

"Look up into the tree."

What did Ethel say?

"It is a pretty white dove." This will give you my idea. The talking of the lesson with the little ones, so as to lead them to read, without any conscious effort to make the reading expressive, but just as they converse with you and each other.

Expression the communication of souls, and is a deeper, more far reaching power than than the mere choice of words. It is a wonderful gift which should be carefully fostered until the soul may grasp the sentiments and inspiration of the great men, who have left their message upon the printed page and by making such sentiments its own, gain in experience and knowledge of what may lie beyond his own life, and by means of the inflections and tones of his voice, interpret to others what they might not have been able to discover for themselves.

Games for Primary Rooms.

Sometimes we play that we are birds and fly about the room. The children choose some bird which they would like to be. The arms and hands are supposed to be wings and it is easy to tell from the position of the arms whether they mean to fly or sail, and they think it great fun to flap the wings. Children oftenest choose to be the whip poor-will because they like to say whip poor-will as they fly about. If they are crows, they say caw, caw, if sparrows, chirp, chirp, and so on trying to imitate all the birds.

When the snow is on the ground children enjoy making imaginary snow balls and throwing them. They pretend to pick the snow from the floor and then roll it as industriously as if they had real snow. Sometimes we make three or four balls and put them on the desks before we throw any and again we throw them as soon as made.

In summer we play picking berries. I go around and put imaginary pails on the childrens arms telling them to go and get the pails full of berries. They like to pick as if the bush were high so that they have to reach, or low so they must stoop in order to get the berries. Frequently they pretend to put berries in their mouths and eat them. Sometimes I buy all the berries, then the children empty their pails into my big pan.

After trying any of these games for four or five minutes the chilren work better and more quietly.

Ellen E. Fitzgerald.

Worcester, Mass.

I have found the following an interesting exercise. A word, twinkle, for instance, is written on the board and the children asked to find as many new words as possible in it without changing the position of the letters. The results are such words as twin, win, in, ink wink. Washington, discovered, however incontestable, are good words for such an exercise.

Mary L. Gaffney.

Worcester, Mass.

Closing Day Exercises.

(Music — Any march of very marked time.)

(We present to our subscribers this month a drill for exhibition work. In the highest primary grades, it seems possible to use the entire drill beginning with the march, and including the bells and Fauntleroy poses. For the lower primary grades, it may be necessary to omit some one of the parts. This can be done with no break in the line, as the teacher will readily find as she comes to study the figures of the drill.)

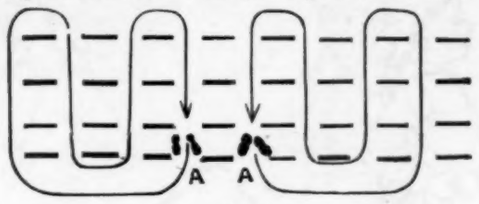


Fig. 1.

1. Children rise, all facing front. The two middle lines A A lead out, passing across front of desks one line towards the right, the other towards the left, up and down the aisles (leaders taking care to keep exactly opposite each other) down middle aisles as indicated by the arrows, *again to A*. In each of the first three figures of this march, notice that the pupils each time lead out from A and end at A.

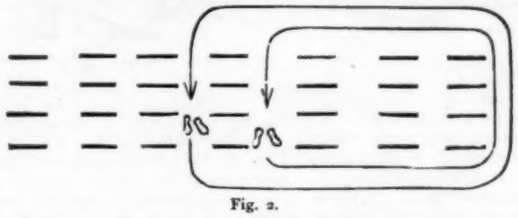


Fig. 2.

2. Children are now *again at A*. Instead now of going *single file*, right *and* left, let all go *double file* to the *left*, as in Fig. 2, *coming again to A*. Repeat this, except that both lines of children the next time go to the *right, coming again to A*.

3. Now first have pupils turn to right, next turn to left, next turn to right, etc. This movement will, of course, bring the pupils at the rear of the room facing two to two. Let

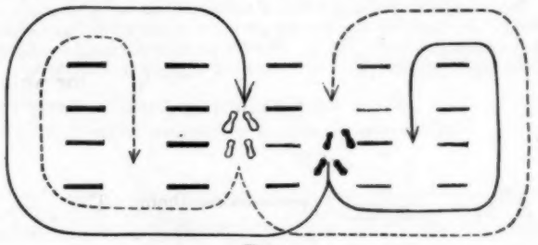


Fig. 3.

these wheel and in such a manner as to come down the four middle aisles. On account of the spaces that must necessarily be formed by every other couple having left the line, the leaders must move very slowly, giving their followers opportunity to close up the file.

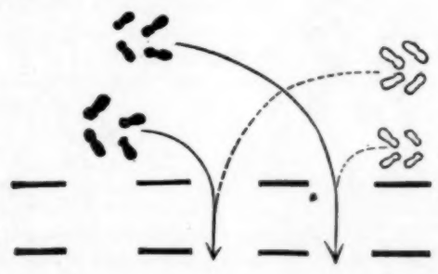


Fig. 4.

Continue around the room again, two going to the right, two to the left, until again they meet face to face at the rear of the room at A.

4. Now let the first couple on the right, wheel into the two middle aisles (represented by the unshaded figures.) Then let the first couple on the left follow the first pair who have wheeled into the aisles; another couple from the right follow these, then another from the left, another from the right, etc., until, by this sort of dove-tail movement the pupils are again in double file.

5. Children are now in two lines down the centre of the room, leader at the front of the room, as they were at the close of 1. Let them now march the right line to the right, the left line to the left, coming face to face at the back of the room as they were in 4. Again dove-tail. This brings the children in single file, down the middle aisle (or one of the middle aisles, according as the chairs are arranged.) Let this single file pass across the front of the room, up one side, then each child pass down his own aisle to his own desk.

If, however, the *dumb-bells* are to be used, let the children first file to the place where the bells are kept, then around to the back of the room, down their respective aisles, to their own chairs.

Fig. 1.

Fig. 2.

Dumb Bell Drill.

(Music — "Stephanie Gavotte.")

(In this or any dumb bell drill, bells may or may not be used. Let no teacher be discouraged because she has no bells, clinched fists do quite as well; or if the teacher likes, the children may be provided with little rods — pieces of broomstick for example — six or seven inches long, with tiny bows at the ends. These pieces of broom-stick will need to be painted all the same color. Very likely they may need to be scraped or sand-papered. Cannot each child prepare his own pair of rods at home? Certainly, many of them can. Then will not the "big boys" help the teacher after school with the rest? Carriage paint does not cost so very much — it would not take very much of it; and though it would all make a little work, it will pay, just for once, at the close of the term.)

Fig. 3.

Fig. 4.

Rotate bells at sides, 1 to 8. (Fig. 1.)
Rotate bells at hips, 1 to 8. (Fig. 2.)
Rotate bells at arm's length out at side, 1 to 8.
Rotate bells over head, 1 to 8. (Fig. 3.)
Rotate bells in front, shoulder high, 1 to 7. (Fig. 4.) Bells on hips at 8.

Advance right foot diagonally forward, 1. (Fig. 5.) Bring foot back to position, 2. Repeat through 8. Same with L. foot through 8. Right foot straight out at R. side, 8 counts. Left foot straight out at left side, 8 counts. Right foot straight backward, 8 counts. Left foot straight backward, 8 counts. (Fig. 6.)

Fig. 5.

Fig. 6.

Throw arms out shoulder high and drop each time back to thighs, four times, the last time bringing bells to hips.

Rotate elbow back four times, eight counts. Left elbow back four times, eight counts. Alternate four times, eight counts. Both four times, eight counts.

Fig. 7.

Fig. 8.

Strike bells behind, 1. Strike bells in front, 2. (Fig. 8.) Repeat through 7 counts. On 8 bring bells to chest.

Strike right bell down at side, (See right bell in Fig. 1.) 1. Bring back to chest position, 2. Repeat through 8 counts. Same with left bell. Same with both bells.

Same order striking right bell, then left bell, then both, *out* shoulder high.

Same order, striking bells up, as in Fig. 3.

Strike right bell straight forward, shoulder high, *bell vertical*, 1. Bring it back to chest position, 2. Repeat through 8 counts. Same with left bell. Same with both bells.

Let music stop on last count. Signal *One!* Children kneel and place bells on floor. (Fig. 10.) Signal *Two!* Children rise and place hands on hips.

(With hands on hips, as at the close of the dumb bell drill, the children are in position for the Fauntleroy Drill, as it has been called. Don't be frightened at the name. It is only a name. We know that Mamie will have on a dress, possibly of too original fashion. Johnnie's jacket and little pantaloons will look like anything but Fauntleroy jacket and pantaloons, but never mind. The poses will "take" just as well and will look very pretty to the ever indulgent audience.

Fig. 9.

Fig. 10.

Now as to the music. Let the little run of three notes be the signal for preparation to the children. On the note marked 1, let the pupils spring quickly to the position of Fig. 1. Hold that position — tableau-like — till the next little run of three notes. Be ready to spring on 2 to position of Fig. 2. In this way, repeating this strain of music over and over, use these nine positions, dropping at last to the first position with hands on hips.)

Too much cannot be said here in warning against haste in movement in this or any drill. If music is used, let the pianist understand that she is expected to watch the drill and time her music — slower or faster — according as the movement requires it. For example, fancy the absurdity of the action in Fig. 7, 8, and 9 being done with the same speed used in Figs. 1 and 2. In the *poses* especially, let there be no haste — no tenseness. The pianist should *accent* in the Fauntleroy Drill to give the child the Preparatory! to the next pose. We give here a few poses *as suggestions*. It will be noticed that they are so arranged that the pupils spring *backward and forward* alternately, as for illustration, Figs. 1 and 2. It would be far less effective, for example, if Fig. 3 followed Fig. 1 or Fig. 5 followed Fig. 4. What ever poses are used — and others may be easily invented, let this contrasting of poses be observed.

Little Lord Fauntleroy Drill.

(Music — First five measures of "Stephanie Gavotte.")

1.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

2.

Fig. 5.

Fig. 6.

Signal *One!* Children kneel and take bells in hands. Signal *Two!* Rise, hands at side, ready to march away with bells. Place bells in place, return single file up side of room, down aisles to their own chairs. Music stops. Signal. Children sit.

"You must always remember," said the Sunday School teacher "that the very hairs of your head are all numbered." Whereupon one of the youngsters, jerking a hair out of his little blond head, and holding it up to her, asked, "What number is this?" —*Selected.*

Teacher.— "Don't you think you are crowding your son a great deal?"

Father.— "No, sir, I am fitting him to be an elevator boy."

The Quarrelsome Guests.*

By Stella Hamilton.

(Two little girls take their places upon the platform, at play with their dolls. Just outside, hidden from the audience, stand two other little girls— the Quarrelsome Guests.)

Scene I.

Edith. I do believe my child's new boots are wearing out. *(Edith holds her doll up to view.)*

Ethel. I shouldn't be surprised. Children are so careless. My Isabel has had nine new summer hats already; and not one has she now fit to be seen.

Edith. O here come Kate and Belle! *(Edith and Ethel spring up to greet their guests. Enter guests, their dolls in their arms.)*

Kate. We've brought our dolls.

Belle. And mamma said we might stay till five o'clock.

Edith. We're ever so glad you've come!

Ethel. And we'll play house here on the lawn!

Kate. O, lovely!

Belle. Won't that be fun?

Edith. Let's go get our playthings.

Ethel. And two umbrellas for houses.

Exit all.

Scene II.

(Children return with umbrellas, toy stove, and many other toys. Chattering together, they say, one quickly following another, "O, what a pretty chair!" "And that lovely stove!" "I wish I had a doll like that!" and many more similar exclamations over the toys. Toys are placed on the floor, the umbrellas are opened, and the children distribute and arrange their toy furniture under the umbrellas. Kate and Belle in one house, Edith and Ethel in the other.)

Kate. (pouting) There's only one stove!

Ethel. Never mind; you and Belle may have that. Edith and I will play we buy everything at the bake-house and so never *have* to cook.

Kate. (still arranging toy furniture. Put that stove here. *(crossly.)*

Belle. I won't have it there. I'm going to have my doll's bed there. And nobody has a bed and a stove side by side.

Kate. I don't care. I'm going to have it here where I want it. *(Both seize the stove. Kate pulls it away from Belle.)*

Belle. (half crying.) You're just the meanest girl I ever knew. I've half a mind not to play with you.

Kate. Who cares? I'm older than you, and I'm going to have the stove where I want it.

Ethel. (calling from the other umbrella house.) Edith and I are going up to the bakery now. Won't you go with us?

Kate. Yes; where is it?

Edith. O, mamma is the baker. We'll go ask her for some cookies.

Exit au.

Scene III.

(Children return, eating cookies.)

Ethel. O, now let's play *visit.*

Edith. O yes; we'll go and call on Belle and Kate.

Kate. That will be lovely.

Belle. Let's get our house ready right away. *(Edith and Ethel cross the platform, dolls in arms, to make their call.)*

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* Adapted from Franklin Third Reader, for Primary Education.

Edith and Ethel. Good afternoon, ladies. We have come to call on you.

Kate and Belle. We are very glad to see you. We have been hoping you might call.

(The callers creep in under the umbrella. Belle moves up close to Kate to make room.)

Kate. Stop crowding, you selfish girl.

The Umbrella House.

Belle. Stop pushing me, or I won't play. I'm not going to sit out there in the sun.

Edith. Let *us* sit out in the sun. Let's play *out here* is your piazza; and that it is the fashion for callers to sit on the piazza. *(Ethel and Edith move out.)*

Ethel. Have you lived in this house very long, Miss Belle and Miss Kate?

Kate. Well, no; not very long. There! you are on my foot. *(to Belle.)*

Belle. I won't play another minute if you are going to crowd so.

Edith. O, don't scold, girls. Let's sing some of our school songs.

(All sing.)

"I know a little girl,
But I won't tell who;
Her hair is of the gold,
Her eyes are of the blue.
She's a pretty little girl,
But I won't tell who."

(Any other song may be substituted.)

Belle. O dear, you *always* put me all out. I *never* can sing with you.

Edith. (*to Ethel*) Let's go home, Ethel. I don't like to visit such cross people.

Ethel. I think we must be going now.

Kate. O *must* you go so early?

Edith. Yes, thank you, we must. Come and return our call very soon. Good-bye! Good-bye! (*Edith and Ethel go back to their own umbrella house, arms around each other's waists.*)

Edith. I'm glad *we* don't quarrel as Kate and Belle do.

Ethel. We shouldn't have any good times at all if we did, should we?

(*At about this time, enter young lady, reading. She passes behind umbrellas. When Kate speaks, she stops reading, stands still and listens.*)

Kate (*loudly*) There, I won't stay with you another minute. You are just too cross for anything. I'm going over to Ethel and Edith. (*Kate crosses the platform.*) O, girls, how nice it seems over here. It seems so cool, too. (*Edith and Ethel move close together to make room for their guest.*)

Edith. We hadn't thought it very warm. The umbrella shades us so.

Kate. But it's hot enough in *our* house. I do believe your umbrella is larger than ours. Any way there seems to be more room.

Young lady. (*stepping forward*) Are you sure it is the umbrella, children, that makes all this difference?

Edith and Ethel. O, Auntie May! (*Children all spring up. Belle comes over from her umbrella.*)

Auntie May. Come Belle. I'm sorry to see you and Kate so quarrelsome. Don't you know, dear children, that the largest house in all the world will feel crowded to people that quarrel? And that the hottest afternoon that ever was will seem very cool and comfortable to two people that love each other and try to make each other happy? Now let us go into the house; there is a little lunch of strawberries and ice-cream waiting for you and your dollies in the dining-room.

Children. O, Auntie May! Auntie May!

Exit all.

A Marching Song.

By C. S. Day, Atco, N. J.

Tune.—"Tramp, tramp, tramp, the boys are marching"

Marching time has come again,
Boys and girls now form in line,
Hands by sides and heads to front in proper style.
Now to march we all begin,
Keeping step in perfect time,
Singing merrily and cheerily the while.

Chorus.—

Tramp, tramp, tramp, we all are marching,
Gainst the giants in our books;
But we know we're sure to win,
For when lesson times begin
We all have a single motto, "Try again."

(The first four lines are sung standing, the children beginning to march as they sing the fifth.)

A Lesson.

(Three little girls dressed in caps and aprons and holding little kittens, or "make believe" ones, should speak the following. They should be seated in chairs upon the platform and should make appropriate movements.)

Now, kitty, sit up
In your prettiest way;
I've a lesson in manners
To teach you to-day.

Oh kitty, for shame!
It is *such* a disgrace,
The way you persist
In washing your face.

You must have a sponge,
And water, and soap,
You'll remember this part
Of the lesson, I hope.

And when my canary
Sings his best song,
You musn't stare at him
So rudely and long.

And when I have callers,
And ask you to jump,
You musn't curl up
In that queer little lump;

Nor walk backward from me,
Nor rub your side,
Nor run away under
The sofa and hide.

Now I guess you have learned
All your noddle will keep;
So cuddle down, kitty,
I'll rock you to sleep.

The First Speech.

They thought I couldn't make a speech,
Because I am so small,
But perhaps if they're not careful,
I'll beat them one and all.
I do not use tobacco,
Or whiskey, wine, or beer,
So, if you want a temperance boy,
You see one right up here. — *Selected.*

Little Things.

(A Recitation.)

Suppose the little cowslip
Should hang its golden cup,
And say I'm such a tiny flower
I'd better not grow up.
How many a weary traveler
Would miss its fragrant smell,
How many a little child would grieve
To miss it from the dell.

Suppose the glistening dewdrop
Upon the grass, should say,
What can a little dewdrop do?
I'd better roll away.
The blade on which it rested,
Before the day was done,
Without a drop to moisten it
Would wither in the sun. —*Exchange.*

A Problem in Threes.

(A Recitation.)

If three little houses stood in a row,
With never a fence to divide,
And if each little house had three little maids
At play in the garden wide,
And if each little maid had three little cats
(Three times three times three),
And if each little cat had three little kits,
How many kits would there be?

And if each little maid had three little friends
With whom she loved to play,
And each little friend had three little dolls
In dresses and ribbons gay,
And if friends and dolls and cats and kits
Were all invited to tea,
And if none of them all should send regrets,
How many guests would there ?

— *St. Nicholas.*

First Year Number Lesson.

By NELLIE M. BROWN, Lowell, Mass.

AIR.—"Yankee Doodle."

We are merry little things,
Count us if you can, sir,
One, (1) two, (2) three, (3) four, (4) five, (5) and six, (6)
Seven, (7) eight, (8) nine, (9) and ten, (10) sir.

Chorus: —

One, two, three, four, five and six,
Seven, eight, nine and ten, sir,
Ten, nine, eight, and seven, and six,
Five, four, three, two, one, sir.

See us standing in a row,
Ten, (10) nine, (9) eight, (8) seven, (7) six, (6) sir,
Five, (5) four, (4) three, (3) two, (2) one, (1) and so
Backward tell us quick, sir.

Chorus.

One is one, (1) and all alone
Is always just the same, sir.
But one and one, (11) and one and two, (12)
Eleven and twelve we name, sir.

Chorus.

The cipher, standing by itself
Means nothing, I am told, sir,
But at the right of figures placed
It makes their worth tenfold, sir.

Chorus.

We add, subtract and multiply,
Make various calculations,
Without our help, how could you, sir,
Make any computations?

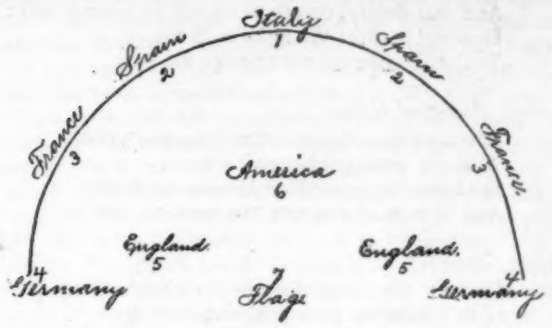
A Flag Exercise.

By ELLA JACOBS, Prin. Warner School, Philadelphia.

(For boys and girls.)

(This exercise is not too difficult for older primary classes and can be made very effective in stage appearance, while it cannot fail to arouse and inspire the patriotism of little Americans. Miss Jacobs supplies the following information as to how the flags may be secured:

"We bought flags 24 × 31 in. for five cents each at John Wanamaker's (Philadelphia). As they had no Italian flags at the time, we made them out of cheap cheese cloth at a cost of about seven cents each. I bought an American shield made of fringed tissue paper and gilt stars: such an exercise can be made elaborate or economical according to fancy."— ED.)



(*A child enters from the rear with a flag of Italy, takes position* (1) *centre of semi-circle and recites:*)

Columbus the hero of this year
Was born of *Italy's* race,
To *her* flag with stripes of colors three,
We give an honored place.

(*Enter two children with Spanish flag, they stand on each side of Italy,* (2, 2), *and recite* —)

But mistrusted by his country
He sought all help from *Spain*,
Her flag first floated o'er our land,
So let it here remain.

(*Enter two children bearing flags of France, take position at side of Spain,* (3, 3,) *and recite:*)

Flag of *France!* thy friendly nation,
Helped to make our country free,
And in welcoming the others,
Heartily we welcome thee.

(*Enter two children with German flags, stand on side of France, ends of semi-circle,* (4, 4,) *and recite:*)

Germany, the fatherland
Across the dark blue sea,
To country and to flag
We gladly welcome thee.

(*Two children with English flags enter, and take position* (5, 5,)*: they recite—*)

England, our mother country,
To us is ever dear,
And to her grand old flag
We give a hearty cheer.

(*Last, a girl dressed as Goddess of Liberty enters and takes position* (6), *she should have a large American shield; following, a child with an American flag,* (7) *who recites:*

"I see the flags of many lands
Of bright and varied hue,
But of all the flags, I love the best
Our own red, white, and blue."

(*All of the group then recite in concert—*)

"Hurrah for our flag, our own dear flag,
With its stars and stripes of blue,
For of all the flags, in all the lands,
There's none so brave and true."

After a pause (in tableau) of a few seconds, let the children sing one stanza of "Star Spangled Banner," and *whistle* the chorus. Then have them march out, America remaining until the last.

This exercise is very effective. Songs and marches can be introduced at pleasure.

A Bouquet Exercise.

By Two Teachers.

(For a class of very little girls. They should be grouped irregularly upon the stage in natural positions, as girls would stand if talking together. Each girl has a few flowers (*one kind only*) which she claims to be prettier than all others. As each girl speaks she holds them up in triumph to the audience, steps forward a little, but looking at the flowers as she speaks.)

First; Daisies.

Oh, daisy gay! Oh, daisy gay!
Smiling out of your heart in that pretty way,
With dewdrops for jewels, sunbeams for a crest,
And that dainty, dainty white ruff on your breast;
Dancing all over the fields with fun;
You're the dearest posy under the sun.

Second; Blue-eyed Grass.

But mine is so modest, the blue-eyed grass,
Tenderly smiling whenever I pass;
She shuts her eyes when lessons are done,
And is wide awake with the morning sun.

Third; Clovers.

Oh! but the clover does wear such a bonnet,
With a hundred pink posies shining upon it,
With little green bows tied under her chin,
And then she's such pockets to put honey in.

Fourth; Columbines.

But the Columbine leans with such airy grace!
And look at her ruffles of satin and lace.

Fifth; Buttercups.

The buttercup owns a storehouse of gold;
She pours each day all her rare cups will hold.

Sixth; Wild Roses.

The wild rose that climbs by the gray old wall,
She is the loveliest flower of all.

Seventh; Ferns.

(She steps into the center of the group and bows, saying,)

With your leave *I* think they are all most fair,
Let me twine these ferns about them just as they are.

(As she says this, she takes from each girl her flowers and quickly makes a bouquet. She then steps forward to *the most important* gentleman present, presumably a member of the school board, and presents it with a low bow and these words, said in a light, laughing way.)

We thank you, sir, for coming
To hear our verse and song
Now will you make a speech for us?
And please — *don't make it long.*

Contraryland.

(A concert exercise for the whole school.)

Sing hey, sing ho, for Contraryland,
Who'll sail on a voyage to Contraryland?
The winds are all steady,
The ship is all ready,
The cargo is filling,
Who's willing, who's willing,
To set sail for Contraryland?

And who shall you find there?
They are all of a kind there,
The great famous band in the Contraryland,
They all sit in corners, like little Jack Horners,
And wait to be teased into saying they're pleased,
Their mouths all droop down,
Their eyebrows all frown,
The sulk and they pout,
And they whine and they flout.

And they steadily say,
All the day, all the day,
"I won't," and "I can't,"
And "I don't," and "I sha'n't."
"It's too high," "It's too low,"
"It's too fast," "It's too slow"
For a dweller in Contraryland.

Sing hey, sing ho, for Contraryland,
Who'll sail on a voyage to Contraryland?
The winds are all steady,
The ship is all ready,
The cargo is filling,
Who's willing, who's willing,
To set sail for Contraryland?

— *Youth's Companion.*

The Difference.

(For a very little girl.)

Eight fingers,
Ten toes,
Two eyes,
And one nose.
Baby said,
When she smelt the rose,
"Oh what a pity
I've only one nose!"

Twelve teeth,
In even rows,
Lots of dimples,
And one nose.
Baby said,
When she smelt the snuff,
"Deary me!
One nose is enough!"

— *Selected.*

Queen Flora.

By M. A. B. Kelly.

(Recitation.)

Have you heard of the court of fair Flora,
Fair Flora, the queen of the May,
With her sweet forest maidens about her,
A weaving her chaplet to-day?

There the lady-fern gives of her treasures
A fringe that were fit for a queen;
And the club moss and ground pine are braiding
Their bright, showy tassels of green.

And to spy her, the Quaker-like mushroom
On tiptoe peeps out from his stool,
As he spreads his broad brim a bit wider,
To keep the air pleasant and cool.

So let's haste to her court in the forest,
For there we shall see her today,
With her maidens all clustered about her
To crown her the Queen of the May.

Over the Bare Hills Far Away.

(Recitation.)

Over the bare hills far away,
Somebody's traveling day by day,
Coming so slowly, I wonder why?
Oh, she is busy as she goes by.

Sing, little brook, wake up and hear!
Where is the song you learned last year?
Don't you remember the dear old tune,
Naughty small brook to forget so soon!

Dainty wee clouds in the bright blue sky,
Last year I taught you to float so high!
Flowers, where are you? Why don't you blow?
Come, Dandelion, *you* can, I know.

Spring up, tall grasses and daisies and clover!
Last year I taught you how over and over,
Come with me, every one, this is the way;
Don't you remember me? *Why, I am May!*

— *Selected.*

Contributions to the several departments of PRIMARY EDUCATION will be welcomed, *promptly considered*, and, if accepted, *promptly paid for*.

Our Large Picture.

To Teachers: This picture is full of the summer wreath making and of crowning little queens of the season. Put it first before the children some day when they are tired, languid and suffering for a pleasant sensation watch their faces as they break into a smile with their eyes full of interest and sympathy, for this picture has the magnetic quality that enlists sympathy at once. Take your own way of starting the children in a current of thought that will set their imagination to work to answer the following questions.

Who are these children? What relation are they to each other? How did they happen to be on this bridge? Did they start for this lovely spot, or did they come upon it with perfect delight, as they would be sure to do if they did not know of it before? What are the principal flowers and foliage about them? Of what is that wreath made? What is the larger girl saying to her as she puts that wreath over her forehead. Give the names of these girls; are they American or foreign children?

From the actual events suggested by the picture, lead the children off to talk of flowers and past scenes. Did *they* ever attend any Summer party where a girl was crowned queen. Of what flowers was that wreath made? In what parts of the country is it warm enough to have "May-parties" and dance around May-poles, and wear wreaths? When you once get the children started in reminiscent stories you have no end of material for oral and written language lessons.

Letters are received from many teachers, giving in detail their method of using our supplementary pictures, and a great deal of what the children say and do about them. This is very encouraging and the credit belongs mainly to the teachers, too. Everything depends on the manner of presentation. A teacher can create a furore over a blank piece of paper in her hand, if she knows how. We shall present a human interest in our pictures in the future, and what child is not on the alert to watch other children? Two cautions, teachers, to be always kept in mind. First, do not forget to interweave something finer, better, and higher than the simple story in the picture, but do it in a way that the children draw the ethical conclusion—*not you*. Second, *do not keep these pictures in sight all the time;* manage to keep their novelty and freshness by keeping them out of sight a large part of the time.

One teacher writes, (Havana, Ill.) "How much we are teaching the children when they will see so much in a picture or in a certain space when left to themselves! If this were taught longer, what a help it would be to them and how much more would we see at the World's Fair in a short time had *we* been trained in the same way."

Supt. Brooks, (Phila.) in his annual report, says in reference to arithmetic in the primary grades, "I have substituted for the Grube system what may be called the Normal system of instruction, so called because it is founded upon the natural development of the mind in the study of numbers. By this method addition and subtraction are taught together in dealing with small numbers, and subsequently multiplication and division are taught together with these numbers. This order is based on the correct philosophy of the subject, addition and subtraction being fundamental, and multiplication and division being derivative processes or operations.

The following is the new course in arithmetic for the first year primary grade, just adopted in Brooklyn, N. Y., and which will go into operation next fall:

"Oral exercises: 1, counting by ones from 1 to 100, and by tens from 10 to 100; 2, addition, adding two or more numbers whose sum does not exceed 9; 3, subtraction, finding the difference between any two numbers, neither of which exceeds 9; 4, multiplication, finding products to and including 9, with two factors; 5, division, finding quotients with dividends not greater than 9 and exact divisors; 6, fractions, (*a*) finding the half of each even number below 10 and finding each even number below 10 when its half is given; (*b*) combining and separating halves within a unit; 7, practical problems, to be restricted in everything but addition, to one operation. Written exercises: 1, notation and numeration, numbers of two figures; 2, addition, adding numbers, no sum to contain more than two figures and no column to foot more than 9; 3, practic l problems."

Willie Elizabeth Robin.

THIS little girl, whose picture is upon the cover of this paper, is blind and deaf and dumb.

In 1890, Willie's mother brought her from Texas to the Perkins Institute for the Blind at South Boston. She was six and a half years old then, and had been totally blind and deaf since the age of 18 months. She had but two signs of communication with the outside world and those were for food and drink. After she entered the kindergarten department of the institution, she had a special teacher for three months; but since that time has received instruction in classes with other blind children, her teacher at her side interpreting to her through the manual alphabet. In less than two years she had acquired a fair use of English, had taken a full kindergarten course of two years, had learned to read raised letters in print, to articulate about one hundred words and could write a little with a pencil.

Since that time she has developed rapidly, showing great ability and a degree of intelligence that promises to make her career as wonderful as it is interesting. She is a healthy, rosy-faced, joyous looking little girl, with none of that groping uncertainty of movement one would naturally look for in her condition. She is mentally and physically on the alert.

Her perceptions are very acute and assist her greatly in her free rambles about the house and grounds. She has noticed the passing of an electric car while walking and called her teacher's attention to it. At another time the vibrations produced by the blowing of the whistle of the steamer were felt so keenly by her that she tried to give a vocal imitation of it.

She is an active little worker, and likes to do things about the house. She takes care of her own room neatly, and puts away her clothes. She uses her fingers deftly, not only in kindergarten handiwork, but in sewing, and is disturbed by anything like disorder. It is the aim of her teachers to give her the same course of instruction in every way as the other children, who are simply blind, giving her all directions through the manual alphabet. So rapidly did she improve at first that one year from the day she had her first lesson on *fan*, she knew over six hundred words and was reading in a book.

With this development of her mental and physical growth there is a corresponding advance in the finer elements of her nature. When she came to the institution, her pretty face was sad and her manner repellant. She had no intercourse with any human being. Now her affections have been awakened and she gladly receives and bestows caresses from her schoolmates and friends. She has a strong will, but her reason is helping her to govern it, and her softened heart and awakened soul has brought her into the happy childhood that is her birthright. Once when she was told that she was going to the seaside and that one of her kindergarten teachers, whom she loves very much, was to be there, she clapped her hands and spelled rapidly on her fingers, "Laugh!" "Smiles!" "Fun!" "Joy!"

After having been away from her home for about two years, she was taken home for a visit. The arrangement of trains, sleeping cars and berths was a great novelty to her, but she followed the porter's movements with eager fingers, seeming to comprehend it all. After a "great many to-morrows" as Willie expressed it, she arrived at the railroad station and the moment her gloved fingers touched a well-known hand, she exclaimed "my dear papa." She immediately recognized her mother as she came into the home, although it was not the home she had left.

This little girl will be watched with profound interest by psychologists, philosophers, and by all who are interested in this field of investigation. What will be her intuitive knowledge in the future? How long will she continue to keep step with other children with whom she is associated, who have four out of the five senses? If a darkened, imprisoned soul can thus be reached and awakened, what must be the conclusion as to the advancement of our little children in the public schools, who have every physical sense perfect? Is their heart and soul growth correspondingly as great as in these afflicted children? E. D. K.

(In this department teachers and editor will meet together for a social talk and exchange of opinions, experiences and suggestions. All that teachers would say of their work, if they were with a congenial company of other teachers will be in place here. Questions and letters to the editor will here receive attention and be treated in the best way to bring the greatest good to the greatest number.)

The Kindergarten for the Blind.

Dedication at Jamaica Plain, Mass.

Every primary teacher would have been deeply interested in the exercises at this school held on Froebel's birthday, April 21. It is an offshoot from the South Boston Institution for the Blind which is well known on both sides the ocean. The plan for a separate school for the little unfortunate blind children originated with Director Anagnos of the parent institution, who has carried it forward through obstacles that would have disheartened any heart less earnest and sanguine. Two buildings have been erected and a well-appointed home for these little children is the

Result of Benevolent Contributions

from the most cultured and philanthropic people of the state. The public interest in the work has grown with every advance step, till it has come to be a sort of Mecca where tired hearts can go for a fresh interest and renewed faith in humanity.

Fifty-one Little Children

all blind, with three of the number deaf and dumb besides, were present during the exercises—a most touching sight—and yet so full of life, enjoyment and vivacity were these little folks, doing their work in perfect darkness, that the sympathetic interest in their every movement prevented the pitying sadness that would naturally be called out by their physical limitations. In showing visitors their everyday work they strung beads in number work with perfect regularity, sewed cards with marvelous deftness, and moulded in clay with their remarkable sense of touch as correctly as *seeing* children might do.

The Story of Froebel

was told by a class of eight little boys and girls who were molding at tiny tables on the stage during the addresses of invited speakers. "Of course you all know," began the first, "that this is Freidrich Froebel's birthday. He was born a long way from here and you must travel there in a steamboat." She then exhibited her model of a steamboat. The next girl showed the house where Froebel was born. The third held up a model of the church close by. The fourth and fifth had made the flower and bird he loved. Each told the story of her own work in a clear, distinct voice, with an enunciation to be imitated by the children in our primary schools.

A Trio.

Three little children—one flaxen haired, another a negro, and the other a tiny Spanish maiden—gave a piano trio with wonderful skill and accuracy; six little hands finding melody and harmony in utter darkness. The whole class gave part songs with clear, sweet voices that suggested the birds they sang about.

The Froebel March

was successfully given by the kindergarten orchestra, a large chorus of boys, each with a different instrument. The trained ear of the children enables them to give such astonishing musical results, that one wonders if the eye is at all necessary in the acquirement or production of music.

Deaf, Dumb and Blind.

The centre of attraction after all was little Willie Elizabeth Robin, a lovely child who has accomplished so much in learning by touch alone. Her interest in the occasion was intense and she talked constantly with her teacher with her fingers, and the play of her countenance, while unconscious of observation and beaming with interest and intelligence, was a study of great psychological interest. With three important gateways to the mind closed, how was the lightning intelligence carried so quickly by touch alone? To watch her—to attempt to reason it out—was to grow deeper in bewilderment every moment. The human mind became a mysterious thing under the observation of the various phenomena of the afternoon and the distinguished speakers present confessed themselves abashed and humbled before such manifestations.

Feeling Throat Vibrations.

During the singing by the class little Willie touched the back of her hand lightly upon the throat of the little girl next to her noting its vibrations as she sang. The picture of this little girl standing radiant and beautiful, with the fingers of one hand talking with her teacher and with the other seeking a knowledge of vocal organs, beyond her power to use for herself, was something never to be forgotten. During the motion exercises she clasped one hand in that of the little girl nearest her and thus catching the movement was able to follow with the other arm and fingers in perfect time with the class. If

Our Primary Children.

could see the hunger with which these children seek for knowledge, and utilize every particle they gain, it would be the very best possible inspiration for them to use their wealth of senses for the same object.

Helen Keller

of whom everybody knows, was the centre of interest in the parlor before the formal exercises began, and her sweet, spiritual face, beaming with a rare intelligence, was a convincing illustration of what can be accomplished with children unable to hear, see, or speak. She told us in spoken words of her love for "the city of kind hearts" as she calls Boston.

Julia Ward Howe

read an original poem upon this occasion. It will be remembered that it was Dr. Samuel Howe who first found his way to the shut up soul of the deaf mute in the person of Laura Bridgeman, whose fame extended the world over. Mrs. Howe's poem closed with these words:

When man's Redeemer heavenward sped,
He uttered a command of might:
"Feed ye my sheep, my lambs," he said,
And softly vanished from man's sight.

So, passing for a fitting word
These happy portals to unlock,
From distant Palestine I heard
The gracious message, "Feed my flock."

Sure when shall come the solemn hour
That links us with death's shadowy sleep,
This thought shall have uplifting power;
Oh Master! we have fed thy sheep.

Let every primary teacher and kindergartner visit this school if possible.

Teachers, ask your worst boy to get you some little boughs, elm, maple, pear, peach, apple, or any of those trees that flower first, and put them in water in the window of your schoolroom, and report progress and growth to you every morning. You will touch the best in boy nature—chivalry, helpfulness, and for the time being, give him a delightful sense of equality; yes, superiority, for a "woman can't get such things, you know." Try it. Lean a little. Lose the teacher in the dependent woman as often as possible in these spring months. Give nature its way with these boys, who have been talked down to all the year, and let them feel their power to do things for you by way of jumping and climbing for treasures that only a boy can get in the whole animate creation. So shall the year end up with discords healed through the harmony that always comes in working for or with nature. It is something really dreadful to close school at the end of a year with a feeling toward any child that you rejoice that the school connection is over. It is natural and just, perhaps, that this should be the feeling that would follow a whole year of inattention and annoyance on the part of some, apparently, incorrigible boy or girl. But never till the secrets of the influences of heredity on that child are known, will it be understood why his "make-up" has been what it is. Again, perfect teaching would have cured that inattention and "don't care" that has driven you nearly wild. In your over-work you may not have been able to give it; or, in your inexperience and ignorance you may not have known how. Try and see both sides of this matter impartially, and take particular care, that the closing weeks you pass together are the pleasantest in the year. In no way can this be accomplished so well as by letting the boy be the little knight to work for "fair ladye." The nineteenth century has not changed boy nature and the spirit of knighthood has not died out.

Some one has said that the great secret of the success of the kindergarten in enlisting the co-operation of the children is, that the teachers never say to the children, "You have disobeyed me," but "You did not help us."

There has been a great gain in the number of chatty letters received from teachers during the last month. They are appreciated, everyone of them. "I do not feel alone any more" writes a lonely teacher in a country school. "PRIMARY EDUCATION fills just the want I have always felt in my school work. I have a friend and helper at last." The tingle of the old teacher feeling of other days, aroused by these magnetic words brought a wish to sit down with this teacher "after school" and talk over everything.

This brings me to the question, what *is* wanted by primary teachers in an educational magazine, "all their very own?" as one teacher writes. How shall I know unless you tell me? Don't ask for too much food already prepared. Far better get the ingredients and the purpose which this food is designed to serve and then prepare it your own way than to get it ready made. *Avoid ready made recipes in teaching.*